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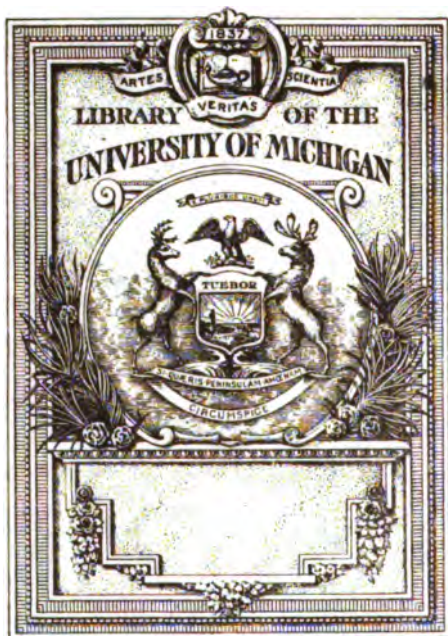
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Serial No. 856; General Series No. 650

THE
UNIVERSITY OF WISCONSIN
CATALOGUE

1916-17

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CALENDAR

1916

Sept. 18-19-20	Mon.-Tu.-Wed.	Registration days.
Sept. 18-19	Mon.-Tu.	Examinations for admission.
Sept. 21	Thursday	Lectures and recitations begin.
Nov. 30	Thursday	Thanksgiving Day: legal holiday.
Dec. 21	Thurs. (Noon)	Christmas recess begins.

1917

Jan. 9	Tues. (8 a. m.)	Exercises resumed.
Jan. 29-Feb. 7	Mon.-Wed.	Final examinations, first semester.
Feb. 8-9	Thur.-Fri.	Registration days.
Feb. 12	Monday	Lectures and recitations begin.
Feb. 22	Thursday	Washington's birthday: legal holiday.
April 11-17	Wed.-Tues. (Inclusive)	Spring recess.
May 30	Wednesday	Memorial Day: legal holiday.
June 9-15	Sat.-Fri.	Final examinations, second semester.
June 14-15	Thur.-Fri.	Examinations for admission.
June 17-20	Sun.-Wed.	Commencement Week.

Commencement Week

June 17	Sunday	Baccalaureate address.
June 18	Monday	Class Day exercises.
June 19	Tuesday	Alumni Day.
June 20	Wednesday	Commencement Day.

Summer Session

June 25	Monday	Summer session opens.
*August 3	Friday	Summer session closes.

*The summer session in the Law School closes August 31.

THE ACADEMIC YEAR 1917-1918

1917

Sept. 24-25-26	Mon.-Tu.-Wed.	Registration days.
Sept. 24-25	Mon.-Tu.	Examinations for admission.
Sept. 27	Thursday	Lectures and recitations begin.
* Sept. 29	Saturday	Special examinations for removal of conditions.
Nov. 29	Thursday	Thanksgiving Day: legal holiday.
Dec. 20	Thurs. (Noon)	Christmas recess begins.

1918

Jan. 8	Tues. (8 a. m.)	Exercises resumed.
Jan. 19	Saturday	Examinations for removal of conditions.
Feb. 4-13	Mon.-Wed.	Final examinations, first semester.
Feb. 14-15	Thur.-Fri.	Registration days.
Feb. 18	Monday	Lectures and recitations begin.
Feb. 22	Friday	Washington's birthday: legal holiday.
April 17-23	Wed.-Tues. (inclusive)	Spring recess.
April 27	Saturday	Examinations for the removal of conditions.
May 30	Thursday	Memorial Day: legal holiday.
June 15-21	Sat.-Fri.	Final examinations, second semester.
June 20-21	Thur.-Fri.	Examinations for admission.
June 23-26	Sun.-Wed.	Commencement week.

* See requirements outlined in *Regulations for the Guidance of Undergraduate Students*.

THE UNIVERSITY OF WISCONSIN

ORGANIZATION AND DIRECTORY OF ADMINISTRATIVE OFFICERS

Charles R. Van Hise, President—University Hall.
W. D. Hiestand, Registrar—University Hall.
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M. E. McCaffrey, Secretary of the Regents—Administration Building.
G. L. Gilbert, Bursar—Administration Building.
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Lois K. Mathews, Dean of Women—Lathrop Hall.

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F. W. Roe, Assistant Dean—3 South Hall.

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THE COURSE IN COMMERCE.

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THE COURSE IN JOURNALISM.

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THE ELECTRICAL ENGINEERING COURSE.

THE CHEMICAL ENGINEERING COURSE.

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THE LONG COURSE IN AGRICULTURE.

THE MIDDLE COURSE IN AGRICULTURE.

THE COURSE IN HOME ECONOMICS.

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THE SHORT COURSE IN AGRICULTURE.

THE DAIRY COURSE.

THE FARMERS' INSTITUTES.

The Law School

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The Medical School

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The Graduate School

G. C. Comstock, Dean—157 University Hall.

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THE DEPARTMENT OF CORRESPONDENCE-STUDY.

THE DEPARTMENT OF GENERAL INFORMATION AND WELFARE.

THE DEPARTMENT OF DEBATING AND PUBLIC DISCUSSION.

The Summer Session

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	TERM EXPIRES
State-at-Large—GILBERT E. SEAMAN, Milwaukee.....	1919
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First District—A. J. HORLICK, Racine.....	1919
Second District—F. W. A. NOTZ, Watertown.....	1918
Third District—CHARLES H. VILAS, Madison.....	1919
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Fifth District—JAMES F. TROTTMAN, Milwaukee.....	1921
Sixth District—MISS FRANCES G. PERKINS, Fond du Lac	1921
Seventh District—D. O. MAHONEY, Viroqua.....	1920
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THE OFFICERS OF INSTRUCTION AND ADMINISTRATION

LEGAL FACULTY

The abbreviations in italic letters indicate the University buildings in which offices are located: *A. A. L.*, Applied Arts Laboratory; *A. C. B.*, Agricultural Chemistry Building; *Adm. B.*, Administration Building; *A. E. B.*, Agricultural Engineering Building; *Agron. B.*, Agronomy Building; *A. H.*, Agricultural Hall; *B. B.*, Biology Building; *C. B.*, Chemistry Building; *C. E. B.*, Chemical Engineering Building; *Clin. B.*, Clinical Building; *E. B.*, Engineering Building; *Econ. Ent. B.*, Economic Entomology Building; *Elec. Lab.*, Electrical Laboratory; *Exper. Breed.*, Experimental Breeding Building; *F. P. L.*, Forest Products Laboratory; *Gym.*, Gymnasium; *H. B.*, Horticultural Building; *H. E. B.*, Home Economics Building—East end, Home Economics and University Extension Building; *H. S. H.*, Hiram Smith Hall; *Hyd. Lab.*, Hydraulic Laboratory; *L. B.*, Law Building; *Lib.*, Library; *M. H.*, Music Hall; *M. S.*, Machine Shops; *N. H.*, North Hall; *S. B.*, Soils Building; *Sc. H.*, Science Hall; *S. H.*, South Hall; *U. E. B.*, University Extension Building—West end, Home Economics and University Extension Building; *U. H.*, University Hall; *W. H. S.*, Wisconsin High School.

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*ERNST, ADOLPHINE BIANCA, Ph. D., Assistant Professor of German. U. E. B. 209.	450 W. Gilman
ERNST, FREDERIC ADOLF, M. A., Assistant Professor of Romance Languages. U. H. 318.	803 State
EVANS, JOSEPH SPRAGUE, M. D., Professor of Clinical Medicine. <i>Clin. B.</i>	25 Mendota Ct.
EYSTER, JOHN AUGUSTINE ENGLISH, M. D., Professor of Physiology. C. E. B. 214.	625 Mendota Ct.
FARRINGTON, EDWARD HOLYOKE, M. S., Professor of Dairy Husbandry. H. S. H. 301.	208 Lathrop
FEISE, ERNST, Ph. D., Associate Professor of German. N. H. 29	1011 Edgewood Ave.
FINCH, VERNOR CLIFFORD, Ph. D., Assistant Professor of Geology. Sc. H. 315.	College Hills
FISCHER, RICHARD, Ph. D., Professor of Chemistry. C. B. 324.	119 E. Johnson
FISH, CARL RUSSELL, Ph. D., Professor of History. <i>Lib.</i> 123.	244 Lake Lawn Place
FISKE, GEORGE CONVERSE, Ph. D., Associate Professor of Latin. U. H. 267.	21 Mendota Ct.
FITZMAURICE, WILLIAM JAY, Assistant Commandant. Assistant Professor of Military Science and Tactics. <i>Armory</i> 2.	803 State
*FLETT, CLARA BAKER, M. A., Mistress of Chadbourne Hall. <i>Chadbourne.</i>	Chadbourne

*On leave of absence, academic year, 1916-17.

OFFICERS OF INSTRUCTION AND ADMINISTRATION 17

FLINT, ALBERT STOWELL, M. A., Astronomer. <i>Washburn Observatory.</i>	450 N. Charter
FRED, EDWIN BRAUN, Ph. D., Associate Professor of Agricultural Bacteriology. <i>A. H. 114.</i>	109 Spooner
FROST, WILLIAM DODGE, Ph. D., Dr. P. H., Professor of Agricultural Bacteriology. <i>A. H. 115B.</i>	310 N. Orchard
FULCHER, GORDON SCOTT, Ph. D., Assistant Professor of Physics. <i>Sc. H. 110.</i>	308 Breese Terrace
FULLER, JAMES GARFIELD, B. S., Associate Professor of Animal Husbandry. <i>A. H. 208A.</i>	1724 Hoyt
GAGE, OTIS AMSDEN, Ph. D., Assistant Professor of Physics. <i>Sc. H. 103.</i>	112 Lathrop
GALPIN, CHARLES JOSIAH, M. A., Assistant Professor of Agricultural Economics. <i>A. H. 316.</i>	29 E. Wilson
GARDNER, EDWARD HALL, M. A., Assistant Professor of English. <i>N. H. 77.</i>	1924 Kendall Ave.
GAY, LUCY MARIA, B. L., Assistant Professor of Romance Languages. <i>U. H. 304.</i>	216 N. Pinckney
GAYLORD, Joseph Searle, M. A., Acting Associate Professor of Public Speaking. <i>U. H. 403.</i>	114 S. Brooks
GEIB, WARREN JACOB, M. Agr., Assistant Professor of Soils. <i>S. B. 206B.</i>	314 Campbell
GERRY, ELOISE, M. A., Lecturer in Forest Products. <i>F. P. L. 16.</i>	419 Sterling Pl.
GIESE, WILLIAM FREDERICK, M. A., Professor of Romance Languages. <i>U. H. 307.</i>	1416 Chandler
GILBERT, EDWARD MARTINIUS, Ph. D., Assistant Professor of Botany. <i>B. B. 308.</i>	25 Spooner
GILLIN, JOHN LEWIS, Ph. D., Professor of Sociology. Secretary, Department of General Information and Welfare. Extension Division. <i>Alumni Bldg. and U. E. B. 204.</i>	209 Highland Ave.
GILMAN, STEPHEN WARREN, LL. B., C. P. A., Professor of Business Administration. <i>N. H. 53.</i>	410 N. Livingston
GILMORE, EUGENE ALLEN, B. A., LL. B. Professor of Law. <i>L. B.</i>	143 Prospect Ave.
GODDARD, ARTHUR LAURENCE, B. S., Superintendent of Shops. Assistant Professor of Mechanical Practice. <i>M. S.</i>	1717 Monroe
GOODNIGHT, SCOTT HOLLAND, Ph. D., Dean of Men. Associate Professor of German. Director of the Summer Session. <i>S. H. 22.</i>	2130 West Lawn Ave.
GRABER, LAURENCE FREDERICK, M. S., Assistant Professor of Agronomy. <i>Agron. B. 31.</i>	421 N. Lake
*GUYER, MICHAEL FREDERICK, Ph. D., Professor of Zoology. <i>B. B. 253.</i>	11 E. Gilman
HADLEY, FREDERICK BROWN, D. V. M., Associate Professor of Veterinary Science. <i>A. H. 203.</i>	803 State
HAERTEL, MARTIN HENRY, Ph. D., Assistant Professor of German. <i>U. H. 154.</i>	College Hills

*On leave of absence, second semester, 1916-17.

- HALL, ARNOLD BENNETT, B. A., J. D., Associate Professor of Political Science. *U. H.* 321. 408 N. Henry
- HALPIN, JAMES GARFIELD, B. S. A., Associate Professor of Poultry Husbandry. *A. C. B.* 218. 2500 University Ave.
- HART, EDWIN BRET, B. S., Professor of Agricultural Chemistry. Chemist to the Experiment Station. *A. C. B.* 123. 302 Lathrop
- HART, WALTER WILSON, B. A., Assistant Professor of Mathematics. *W. H. S.* 105. R. F. D. No. 7.
- HASTINGS, EDWIN GEORGE, M. S., Professor of Agricultural Bacteriology. *A. H.* 212. 1906 West Lawn Ave.
- HATCH, KIRK LESTER, B. S., Professor of Agricultural Education. Assistant Director of Agricultural Extension Service. *A. H.* 104A. 302 Chamberlin Ave.
- HECKER, CHARLES HENRY, Ch. E., Ph., D., Assistant Professor of Chemical Engineering. *C. E. B.* 111. 18 Mendota Ct.
- HENDERSON, WILSON HOGAN, District Representative, Milwaukee District. Extension Division. *University Extension Bldg., 471 Van Buren St.* 296-21st St., Milwaukee
- HENMON, VIVIAN ALLEN CHARLES, Ph. D., Director of the Course for the Training of Teachers. Professor of Education. *U. H.* 123. 125 Spooner
- HENRY, WILLIAM ARNON, Sc. D., D. Agr., Professor of Agriculture. *Emeritus. A. H.* 62
- HESS, RALPH HENRY, Ph. D., Associate Professor of Political Economy. *S. H.* 21. 137 Prospect Ave.
- HETHERINGTON, CLARK WILSON, B. A., Professor of Physical Education. *Alumni Bldg.* 124 Breese Terrace
- HIBBARD, BENJAMIN HORACE, Ph. D., Professor of Agricultural Economics. *A. H.* 301. 2235 Hollister Ave.
- HIESTAND, WILLIAM DIXON, Registrar. *U. H.* 158. 16 W. Gorham
- HILL, DAVID SPENCE, Ph. D., LL. D., Acting Professor of Education. *U. H.* 119. 419 Sterling Pl.
- HOBBS, GEORGE WILLIAM, B. S., Acting District Representative, Eau Claire District. Extension Division. *Library.* 803 S. Farwell St., Eau Claire
- *HOGAN, WILLIAM EDWARD, M. E., Assistant Professor of Drawing and Machine Design.
- HOHLFELD, ALEXANDER RUDOLPH, Ph. D., Professor of German. *N. H.* 27. 104 Breese Terrace
- **HOLDEN, EDWIN CHAPIN, E. M., Professor of Mining and Metallurgy.
- HOOL, GEORGE ALBERT, B. S., Associate Professor of Structural Engineering. *U. E. B.* 308. College Hills
- HOPKINS, ANDREW WINKLE, B. L., Agricultural Editor. Professor of Agricultural Journalism. *A. H.* 118. College Hills
- HORNBECK, STANLEY KUHLE, Ph. D., Assistant Professor of Political Science. *U. H.* 321. 505 N. Carroll
- HOUGHTON, HARRY GARFIELD, M. A., Assistant Professor of Public Speaking. *U. H.* 453. 625 Mendota Ct.
- HUBBARD, FRANK GAYLORD, Ph. D., Professor of English. *U. H.* 354. 2006 Monroe

* Resigned February 24, 1917.

** On leave of absence, academic year, 1916-17.

- HUMPHREY, CLARENCE JOHN, B. A., B. S. F., Lecturer in Forest Products. *F. P. L.* 20 Lathrop
- HUMPHREY, GEORGE COLVIN, B. S., Professor of Animal Husbandry. *A. H.* 208B. 428 University Farm Pl.
- HYDE, GRANT MILNOR, M. A., Assistant Professor of Journalism. Editor of the University Press Bureau. *S. H.* 32 and 39. 415 N. Park
- * INGERSOLL, LEONARD ROSE, Ph. D., Associate Professor of Physics. *Sc. H.* 110. 1933 West Lawn Ave.
- JACKSON, REGINALD HENRY, M. D., Lecturer in Clinical Medicine. 415 N. Carroll
- JAMES, JOHN AMBROSE, B. S., Assistant Professor of Agricultural Education. *A. H.* 104B. 312 Breese Terrace
- JANSKY, CYRIL METHODIUS, B. A., B. S., Associate Professor of Electrical Engineering. *U. E. B.* 310. 2117 Jefferson
- JASTROW, JOSEPH, Ph. D., Professor of Psychology. *U. H.* 12. 237 Langdon
- JOHNSON, AARON GUY, Ph. D., Assistant Professor of Plant Pathology. *H. B.* 206. 1910 West Lawn Ave.
- *JOHNSON, GERTRUDE ELIZABETH, B. A., Assistant Professor of Public Speaking. *U. H.* 204. 221 N. Brooks
- JOHNSON, JAMES, M. S., Assistant Professor of Horticulture. *H. B.* 108. 1915 Regent
- JONES, EDWARD RICHARD, M. S., Associate Professor of Soils. *S. B.* 208. 136 Breese Terrace
- JONES, LEWIS RALPH, Ph. D., Professor of Plant Pathology. *H. B.* 211. 1731 Regent
- JONES, THOMAS EDWARD, B. A., Assistant Professor of Physical Education. *Gym.* 1A. 140 Breese Terrace
- JUDAY, CHANCEY, M. A., Lecturer in Zoology. *B. B.* 480. 35 Lathrop
- KAHLENBERG, LOUIS, Ph. D., Director of the Course in Chemistry. Professor of Chemistry. *C. B.* 153. 234 Lathrop
- KEITT, GEORGE WANNAMAKER, Ph. D., Assistant Professor of Plant Pathology. *H. B.* 202. 803 State
- KELLER, WILLIAM JACOB, Ph. D., Assistant Professor of German. *N. H.* 35. 306 Prospect Ave.
- * KELLEY, ELIZABETH BEATRICE, B. A., B. S., Assistant Professor of Home Economics. *H. E. B.* 401. 425 Sterling Pl.
- KELLEY, FREDERICK THOMAS, Ph. D., Assistant Professor of Semitic Languages and Hellenistic Greek. *S. H.* 7a. 2019 Monroe
- KEOWN, ROBERT MCARDLE, B. S., Assistant Professor of Machine Design. *E. B.* 225. 118 Spooner
- KERR, ALEXANDER, M. A., Litt. D., Professor of the Greek Language and Literature. *Emeritus. U. H.* 265. 140 Langdon
- KIEKHOFER, WILLIAM HENRY, B. A., Assistant Professor of Political Economy. *S. H.* 27. 618 State
- KIND, JOHN LOUIS, Ph. D., Associate Professor of German. *N. H.* 33. 414 N. Livingston
- **KING, WILLFORD ISBELL, Ph. D., Assistant Professor of Political Economy.

*On leave of absence, second semester, 1916-17.

**Resigned January 17, 1917.

- KINNE, WILLIAM SPAULDING, B. S., Associate Professor of Structural Engineering. *E. B.* 311. 2105 West Lawn Ave.
- KLEINHEINZ, Frank, Assistant Professor of Animal Husbandry. *Sheep Barn.* 412 N. Charter
- KOEHLER, ARTHUR, B. S., Lecturer in Forest Products. *F. P. L.* 12. 1803 Vilas
- KOMMERS, JESSE BENJAMIN, B. S., Assistant Professor of Mechanics. *E. B.* 115. 1814 Chadbourne Ave.
- KOWALKE, OTTO LOUIS, Ch. E., Associate Professor of Chemical Engineering. *C. E. B.* 103. 2012 Jefferson
- KRAUSEOFF, FRANCIS CRAIG, Ph. D., Assistant Professor of Chemistry. *C. B.* 159. 1915 West Lawn Ave.
- KREMERS, EDWARD, Ph. D., Sc. D., Director of the Course in Pharmacy. Professor of Pharmaceutical Chemistry. Director of the Pharmaceutical Experiment Station. *C. B.* 303. 1720 Vilas
- KRESS, OTTO, Ph. D., Lecturer in Forest Products. *F. P. L.* 433 N. Murray
- *KRESSMAN, FREDERICK WILLIAM, M. S., Lecturer in Forest Products. *F. P. L.* 20 Lathrop
- LAIRD, ARTHUR GORDON, Ph. D., Associate Professor of Greek and Comparative Philology. *U. H.* 265. 130 Prospect Ave.
- LANGMAS, ARTHUR SAMUEL, B. A., Acting District Representative, Oshkosh District. Extension Division. *Burtis Bldg., 175 Main St.* 44 Madison St., Oshkosh.
- LARSON, GUSTUS LUDWIG, M. E., Associate Professor of Steam and Gas Engineering. *E. B.* 224. 204 N. Pinckney
- LATHROP, HENRY BURROWES, B. A., Associate Professor of English. *U. H.* 355. 427 N. Butler
- LEITH, BENJAMIN DONALD, B. S., Assistant Professor of Agronomy. *Agron. B.* 33. 2545 Harper
- LEITH, CHARLES KENNETH, Ph. D., Professor of Geology. *Sc. H.* 207. 240 Langdon
- LENHER, VICTOR, Ph. D., Professor of Chemistry. *C. B.* 203. 158 Summit Ave.
- †LEONARD, WILLIAM ELLERY, Ph. D., Assistant Professor of English.
- LESTER, CLARENCE BROWN, M. A., Department of Special Legislative Library Training. *Capitol.* 2152 West Lawn Ave.
- LIGHTY, WILLIAM HENRY, Ph. B., Secretary of the Correspondence-Study Department. *U. E. B.* 105. R. F. D. No. 7
- LIVINGSTON, CARL DONNAN, B. S., Assistant Professor of Agricultural Engineering. *A. E. B.* 2. 202 Prospect Ave.
- LLOYD JONES, CHESTER, Ph. D., Professor of Political Science. *U. H.* 319. 151 Summit Ave
- LLOYD JONES, THOMAS, B. S., Assistant Professor of Education. Inspector of Schools. *U. H.* 118. Nakoma
- LOEVENHART, ARTHUR SOLOMON, M. S., M. D., Professor of Pharmacology and Toxicology. *C. E. B.* 300. 1633 Jefferson
- LORENZ, WILLIAM FREDERICK, M. D., Associate Professor of Psychiatry. *Clin. B.* Mendota

*Resigned November 7, 1916.

†On leave of absence, academic year 1916-17.

OFFICERS OF INSTRUCTION AND ADMINISTRATION 21

- LUTHER, ERNEST LEONARD, B. A., B. S., State Supervisor of County Representatives, College of Agriculture. Superintendent of Farmers' Institutes. *A. H.* 3. 1933 Keyes Ave.
- MCCAFFERY, RICHARD STANISLAUS, E. M., Professor of Mining and Metallurgy. *E. B.* 212. 1937 Arlington Pl.
- MCCARTHY, CHARLES, Ph. D., Litt. D., Lecturer in Political Science. *Capitol*. 1109 University Ave.
- MCCOLLUM, ELMER VERNER, Ph. D., Professor of Agricultural Chemistry. *A. C. B.* 125. 1910 Adams
- MCGILVARY, EVANDER BRADLEY, Ph. D., Professor of Philosophy. *U. H.* 104. 1902 Arlington Pl.
- MACGREGOR, FORD HERBERT, M. A., Assistant Professor of Political Science, Extension Division. Chief of Municipal Reference Bureau, Department of General Information and Welfare, Extension Division. *U. E. B.* 103. 115 Spooner
- *MACK, JOHN GIVAN DAVIS, M. E., Professor of Machine Design. *Capitol*. 110 E. Johnson
- MANCHESTER, FREDERICK ALEXANDER, Ph. D., Assistant Professor of English. *U. H.* 355. 130 1/2 Lathrop
- MARCH, HERMAN WILLIAM, Ph. D., Assistant Professor of Mathematics. *U. H.* 61. 625 Mendota Ct.
- MARLATT, ABBY LILLIAN, M. S., Director of the Course in Home Economics. Professor of Home Economics. *H. E. B.* 119. 612 Howard Pl.
- MARSHALL, WILLIAM STANLEY, Ph. D., Associate Professor of Entomology. *B. B.* 457. 139 E. Gilman
- MARTIN, LAWRENCE, Ph. D., Associate Professor of Physiography and Geography. *Sc. H.* 306. 2011 Chadbourne Ave.
- MASON, MARTHA, B. A., Mistress of Barnard Hall. Vocational Advisor of Women. *Barnard*. Barnard
- MASON, MAX, Ph. D., Professor of Mathematical Physics. Secretary to the Faculty. *Sc. H.* 11G. 152 W. Gorham
- MATHEWS, JOSEPH HOWARD, Ph. D., Assistant Professor of Chemistry. *C. B.* 55. 128 Lathrop
- MATHEWS, LOIS KIMBALL, Ph. D., Dean of Women. Associate Professor of History. *Lathrop*. Lathrop
- MAURER, EDWARD ROSE, B. C. E., Professor of Mechanics. *E. B.* 113. 167 Prospect Ave.
- MEAD, DANIEL WEBSTER, C. E., Professor of Hydraulic and Sanitary Engineering. *E. B.* 219. 120 W. Gorham
- MEAD, WARREN JUDSON, M. A., Assistant Professor of Geology. *Sc. H.* 201. 922 Van Buren
- MEANWELL, WALTER ERNEST, M. D., Dr. P. H., Associate Professor of Physical Education. Director of the Gymnasium. *Gym.* 1B. 1109 W. Johnson
- MEEK, WALTER JOSEPH, Ph. D., Associate Professor of Physiology. *C. E. B.* 214. 2015 Chadbourne Ave.
- MELVILLE, ANDREW HUTTON, Ph. B., Chief, Bureau of Civic, Commercial and Community Development, Extension Division. *U. E. B.* 206. 1814 Kendall Ave.

*On leave of absence, academic year, 1916-17.

- MENDENHALL, CHARLES ELWOOD, Ph. D., Professor of Physics. *Sc. H.* 107. 510 N. Carroll
- MICHELL, ROBERT BELL, Ph. D., Assistant Professor of Romance Languages. *U. H.* 308. 808 Oakland Ave.
- MIDDLETON, WILLIAM SHAINLINE, M. D., Assistant Professor of Clinical Medicine. *Clin. B.* 762 Langdon
- MILLAR, ADAM VAUSE, M. S., Assistant Professor of Drawing and Descriptive Geometry. *E. B.* 403. 1011 Grant
- MILLER, EMERSON R., Ph. C., M. S., Acting Assistant Professor of Plant Chemistry. Chemist to the Pharmaceutical Experiment Station. *C. B.* 315. 214 N. Murray
- MILLER, ERIC REXFORD, Local Forecaster, U. S. Weather Bureau. Lecturer in Meteorology. *N. H.* 84. 2125 Van Hise Ave.
- MILLER, HARRY LLOYD, B. A., Assistant Professor of Education. Principal of the Wisconsin High School. *W. H. S.* 110. 446 N. Charter
- MILLER, WILLIAM SNOW, M. D., Professor of Anatomy. *Sc. H.* 404. 2001 Jefferson
- MILLS, CHARLES HENRY, Mus. D., Director of the School of Music. Professor of Music. *M. H.* 21. 2119 Jefferson
- MILWARD, JAMES GARFIELD, M. S., Assistant Professor of Horticulture. *H. B.* 118. 2103 Rowley Ave.
- MITCHELL, WILLIAM K., B. S., District Representative, Wausau District, Extension Division. 826 Steuben St., Wausau
- MOODY, FRANK BENJAMIN, M. S. F., Lecturer in Farm Forestry. *Capitol.* 1914 Vilas
- MOORE, JAMES GARFIELD, M. S., M. H., Professor of Horticulture. *H. B.* 106. 809 Grant
- MOORE, RANSOM ASA, Professor of Agronomy. *Agron. B.* 27. 202 S. Warren
- *MORGAN, BAYARD QUINCY, Ph. D., Assistant Professor of German. *N. H.* 27. 1710 Adams
- * MORRIS, SARAH ISABELLE, M. D., Assistant Professor of Clinical Medicine. *Clin. B.* 762 Langdon
- MORRISON, FRANK BARRON, B. S., Assistant Director, Agricultural Experiment Station. Assistant Professor of Animal Husbandry. *A. H.* 101. 1708 Regent
- MUSBACH, FRED LUDWIG, B. S., Assistant Professor of Soils. In charge of Marshfield Branch Experiment Station. 207 S. Maple St., Marshfield
- NEWLIN, JOHN A., B. S., Lecturer in Forest Products. *F. P. L.* 2240 Keyes Ave.
- **NORRIS, EARLE B., M. E., Associate Professor of Mechanical and Industrial Subjects.
- O'CONNOR, JOHN PEASLEE, District Representative, Superior District, Extension Division. *Columbia Bldg.* 14-15., Superior. 1907 Hammond Ave., Superior
- OGG, FREDERIC AUSTIN, Ph. D., Associate Professor of Political Science. *U. H.* 324. 1715 Kendall Ave.
- OLSON, JULIUS EMIL, B. L., Professor of Scandinavian Languages and Literature. *U. H.* 60. 1909 Adams

*On leave of absence, second semester, 1916-17.

**On leave of absence, academic year, 1916-17.

OFFICERS OF INSTRUCTION AND ADMINISTRATION 23

O'NEILL, JAMES MILTON, B. A., Professor of Rhetoric and Oratory. <i>U. H.</i> 204.	145 Iota Ct.
OOSTERHUIS, ALVIN CECIL, M. S., Assistant Professor of Animal Husbandry. <i>A. H.</i> 208.	803 State
ORTE, HERBERT DENNY, B. S., Assistant Professor of Drawing and Descriptive Geometry. <i>E. B.</i> 404.	Nakoma
O'SHEA, M. VINCENT, B. L., Professor of Education. <i>U. H.</i> 108.	140 Langdon
OTIS, DANIEL HENRY, M. S., Assistant Dean, College of Agriculture. Professor of Farm Management. <i>A. H.</i> 105.	1822 Chadbourne Ave.
OTTO, MAX CHARLES, Ph. D., Associate Professor of Philosophy. <i>U. H.</i> 106.	1155 Edgewood Ave.
*OVERTON, JAMES BERTRAM, Ph. D., Professor of Plant Physiology. <i>B. B.</i> 54.	512 Wisconsin Ave.
OWEN, EDWARD THOMAS, Ph. D., Professor of French and Linguistics. <i>Emeritus.</i>	618 State
**PAGE, WILLIAM HERBERT, B. A., LL. M., S. J. D., Professor of Law. <i>L. B.</i> 35.	10 Vista Road
PARKER, FLETCHER ANDREW, Professor of Music. <i>Emeritus.</i>	14 W. Gilman
PAXSON, FREDERIC LOGAN, Ph. D., Professor of History. <i>U. H.</i> 208.	629 N. Frances
PEARSE, ARTHUR SPERRY, Ph. D., Associate Professor of Zoology. <i>B. B.</i> 151.	2240 Rowley Ave.
PENDLETON, CHARLES SUTPHIN, M. A., Assistant Professor of English. <i>W. H. S.</i> 209.	803 State
PETERSON, WILLIAM HAROLD, Ph. D., Assistant Professor of Agricultural Chemistry. <i>A. C. B.</i> 133.	College Hills
PHILLIPS, JAMES DAVID, B. S., Assistant Dean, College of Engineering. Professor of Drawing and Descriptive Geometry. <i>E. B.</i> 303.	1925 West Lawn Ave.
PITMAN, ANNIE MARIA, Ph. D., Assistant Professor of English, Greek and Latin. <i>U. E. B.</i> 212.	414 N. Henry
†POWERS, LE GRAND, D. Lit., Lecturer in Political Economy. <i>S. H.</i> 24.	803 State
PRICE, JOHN REESE, B. S., Assistant Professor of Electrical Engineering. <i>M. S.</i>	1818 Chadbourne Ave.
PYRE, JAMES FRANCIS AUGUSTINE, Ph. D., Associate Professor of English. <i>U. H.</i> 367.	R. F. D. No. 7
REBER, LOUIS EHRHART, M. S., Sc. D., Dean, University Extension Division. <i>U. E. B.</i> 108.	29 E. Wilson
REED, FRANK OTIS, Ph. D., Assistant Professor of Romance Languages. <i>U. H.</i> 306.	1910 Jefferson
*REGAN, ALICE, Assistant Professor of Music.	
RICHARDS, HARRY SANGER, LL. B., LL. D., Dean of the Law School. Professor of Law. <i>L. B.</i>	14 Prospect Ave.
RINKER, FREDERICK CASPER, M. D., Assistant Professor of Clinical Medicine. <i>Clin. B.</i>	429 Hawthorne Pl.

*On leave of absence, first semester, 1916-17.

**Appointment to take effect February, 1917.

†Appointed January 30, 1917.

*On leave of absence, academic year, 1916-17.

- ROE, FREDERICK WILLIAM, Ph. D., Assistant Dean of the College of Letters and Science. Assistant Professor of English. *S. H.* 3. 2015 Van Hise Ave
- ROEBUCK, JOHN RANSOM, Ph. D., Assistant Professor of Physics. *Sc. H.* 10B. 2210 Hollister Ave.
- ROEDDER, EDWIN CARL LOTHAR, Ph. D., Associate Professor of German Philology. *N. H.* 26. 1614 Hoyt
- ROOT, WINFRED TREXLER, Ph. D., Associate Professor of History. *U. H.* 208. 1914 Jefferson
- ROSS, EDWARD ALSWORTH, Ph. D., LL. D., Professor of Sociology. *S. H.* 28. 1941 Arlington Pl.
- RUNDELL, OLIVER SAMUEL, LL. B., Associate Professor of Law. *L. B.* 1812 Kendall Ave.
- RUSSELL, HARRY LUMEN, Ph. D., Dean of the College of Agriculture. Director of the Agricultural Experiment Station. Director of Agricultural Extension Service. *A. H.* 101. University Farm Pl.
- SABIN, FRANCES ELLIS, M. A., Assistant Professor of Latin. *W. H. S.* 207. 419 Sterling Pl.
- SAMMIS, JOHN LANGLEY, Ph. D., Associate Professor of Dairy Husbandry. *H. S. H.* 303A. 234 Breese Terrace
- SANBORN, JOHN BELL, Ph. D., Lecturer in Law. *L. B.* 2115 Van Hise Ave.
- *SCHLATTER, EDWARD BUNKER, Ph. D., Assistant Professor of Romance Languages.
- SCHMIT, CELESTINE LEONTINE, Associate Professor of Home Economics. *H. E. B.* 222. 22 S. Carroll
- SCHORGER, ARLIE WILLIAM, Ph. D., Lecturer in Forest Products. *F. P. L.* 23. 2021 Kendall Ave.
- SCOTT, ALMERE LOUISE, B. A., Secretary of the Department of Debating and Public Discussion, Extension Division. *U. E. B.* 104. 1619 Regent
- SCOTT, WILLIAM AMASA, Ph. D., LL. D., Director of the Course in Commerce. Professor of Political Economy. *N. H.* 55. 222 Spooner
- SELLERY, GEORGE CLARKE, Ph. D., Professor of History. *Lib.* 123. 2021 Van Hise Ave.
- SEYBOLT, ROBERT FRANCIS, Ph. D., Assistant Professor of Education. *U. H.* 119. 419 Sterling Pl.
- SHARP, FRANK CHAPMAN, Ph. D., Professor of Philosophy. *U. H.* 106. 659 Mendota Ct.
- SHEALY, EDWARD MARVIN, B. S., Assistant Professor of Steam Engineering. *U. E. B.* 307. 2547 McKinley
- SHOWERMAN, GRANT, Ph. D., Professor of Latin. *U. H.* 266. 410 N. Butler
- SHUSTER, JOHN WESLEY, B. S., Assistant Professor of Electrical Engineering. *E. B.* 203. 102 Spooner
- SKINNER, ERNEST BROWN, Ph. D., Associate Professor of Mathematics. *U. H.* 255. 210 Lathrop
- SLAUGHTER, MOSES STEPHEN, Ph. D., Professor of Latin. *U. H.* 267. 633 Frances

*On leave of absence, academic year, 1916-17.

OFFICERS OF INSTRUCTION AND ADMINISTRATION 25

SLICHTER, CHARLES SUMNER, M. S., Sc. D., Professor of Applied Mathematics. <i>U. H.</i> 254.	636 Frances
SMITH, CHARLES AUGUSTUS, M. A., Assistant Professor of History. <i>U. H.</i> 206.	1812 Ray
SMITH, CHARLES FORSTER, Ph. D., LL. D., Professor of Greek and Classical Philology. <i>U. H.</i> 263.	1715 Kendall Ave.
SMITH, HOWARD LESLIE, B. A., LL. B., Jackson Professor of Law. <i>L. B.</i>	1632 Jefferson
SMITH, NUGH ALLISON, M. A., Professor of Romance Languages. <i>U. H.</i> 309.	15 Prospect Ave.
SMITH, LEONARD SEWELL, C. E., Associate Professor of Topographical and Highway Engineering. <i>E. B.</i> 107.	939 University Ave.
SMITH, WALTER McMYNN, B. A., Librarian. <i>Lib.</i> 220.	127 Langdon
SNOW, BENJAMIN WARNER, Ph. D., Professor of Physics. <i>Sc. H.</i> 107.	221 Langdon
STARCH, DANIEL, Ph. D., Assistant Professor of Psychology and Education. <i>U. H.</i> 13.	220 N. Murray
STEENBOCK, HARRY, Ph. D., Assistant Professor of Agricultural Chemistry. <i>A. C. B.</i> 117.	2117 West Lawn Ave.
STEIDTMANN, EDWARD, Ph. D., Assistant Professor of Geology. <i>Sc. H.</i> 204.	2002 Monroe
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†Resigned November 8, 1916.

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*Resigned January 17, 1917.

**Appointment for the second semester, 1916-17.

†Appointment for the first semester, 1916-17.

°Appointed January 30, 1917.

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*BRECKON, ELIZABETH, Instructor in Home Economics. <i>University Club</i> 200.	803 State
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BROWN, LISLE WINFIELD, University Photographer. Assistant in Physics. <i>A. H.</i> 20.	2202 Keyes Ave.
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BRYAN, GEORGE SMITH, Ph. D., Instructor in Botany. <i>B. B.</i> 403.	803 State

*Appointed January 17, 1917.

**Appointed December 6, 1916.

- BUCK, HOWARD, Instructor in Physical Education. *Gym.* 1E. 408 N. Henry
- BURD, HENRY ALFRED, Ph. D., Instructor in English. *U. H.* 364. 223 S. Mills
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- BURNS, ROBERT EMMETT, Student Assistant in Anatomy. *Sc. H.* 409. 531 State
- BUTLER, LEE WRIGHT, B. A., Assistant in Physics. *Sc. H.* 105. 113 W. Gorham
- CAHN, ALVIN ROBERT, M. S., Assistant in Zoology. *B. B.* 459. 419 Sterling Pl.
- *CALKINS, AUDLEY BERLYN, B. A., Assistant in English.
- CAMPBELL, LILY BESS, M. A., Instructor in English. *U. H.* 370. 419 Sterling Pl.
- CAMPBELL, MEREDITH FAIRFAX, B. S., Assistant in Pathology. *Sc. H.* 411. 1825 Monroe
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* Resigned February 24, 1917.

** Resigned January 17, 1917.

† Appointed February 24, 1917.

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GREUBEL, OTTO WASHINGTON, M. A., Instructor in German. <i>N. H.</i> 36.	204 Bernard Ct.
GRIFFITH, CLYDE IRVING, B. S., Instructor in Agricultural Engineering. <i>A. E. B.</i> 108B.	145 Iota Ct.
GRISWOLD, JAY BROWN, Assistant and Field Organizer, Oshkosh District, Extension Division. <i>Burtis Bldg., 175 Main St.</i>	44 Madison St., Oshkosh
GUGLER, MILTON CLARENCE, B. A., Assistant in Botany. <i>B. B.</i> 407.	418 N. Warren
GUNDERSON, OSCAR, B. S., County Representative, College of Agriculture, Vilas County.	Eagle River

* Resigned February 24, 1917.

GUNN, REUBEN VERRIN, B. S., Instructor in Farm Practice and Agricultural Economics. <i>A. H.</i> 108.	811 Garfield
HAAKE, ALFRED PAUL, M. A., Assistant in Political Economy. <i>N. H.</i> 80.	431 N. Lake
*HAMBLETON, JAMES ISAAC, Instructor in Economic Entomology. <i>Econ. Ent. B.</i> 204.	610 State
HAMILTON, ARTHUR, Ph. D., Instructor in Romance Languages. <i>U. H.</i> 308.	1726 Van Hise Ave.
HAMILTON, BRADFORD, Student Assistant in Business Administration. <i>N. H.</i> 80.	308 N. Murray
HARALSON, MARION FLINT, M. D., Instructor in Pathology. <i>Sc. H.</i> 411.	803 State
HARNESSE, STANLEY BATES, B. A., Instructor in English. <i>U. H.</i> 364.	145 Iota Ct.
HARVEY, PAUL ATWOOD, B. S., Assistant in Botany. <i>B. B.</i> 404.	619 W. Johnson
HAUSSMANN, JOHN FRED, Ph. D., Instructor in German. <i>N. H.</i> 35.	438 N. Lake
HAWKINS, AUBREY L., M. A., Instructor in English. <i>U. H.</i> 364.	803 State
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HAZELTINE, MARY EMOGENE, B. S., Preceptor of Library School. Instructor in Bibliography. <i>Madison Free Library.</i>	515 N. Carroll
HENNING, OSCAR ADAM, M. A., Assistant in German. <i>U. E. B.</i> 209.	915 University Ave.
HEPLER, JESSE RAYMOND, B. S., Instructor in Horticulture. <i>H. B.</i> 103.	16 Lathrop
HIBBARD, CLARENCE ADDISON, B. A., Assistant in English. <i>U. H.</i> 361.	803 State
HILLS, RALPH WINCHESTER, Instructor in Mechanical Drawing. <i>U. E. B.</i> 303.	2625 McKinley
HINDMAN, HARRY HINGSTON, Instructor in Physical Education. <i>Gym.</i> 1E.	18 Mendota Ct.
HODGES, FRED JENNER, Student Assistant in Physiology. <i>C. E. B.</i> 214.	406 N. Murray
**HOLDEN, EUGENE DAVENPORT, B. S., Instructor in Agronomy. <i>Agron. B.</i> 24.	30 Lathrop
HOLLANDER, LEE M., Ph. D., Instructor in German. <i>N. H.</i> 39.	202 Forest
HOLT, HARRIETTE GRACE, M. A., Instructor in Mathematics. <i>U. E. B.</i> 309.	14 Prospect Ave.
HOOVER, WILLIAM H., M. A., Assistant in Physics. <i>Sc. H.</i> 105.	1621 Jefferson

*Appointed January 17, 1917.

**Appointed February 24, 1917.

HOUSEHOLDER, GLEN MONROE, B. S., County Representative, College of Agriculture, Rusk County. <i>Court House.</i>	Ladysmith
HOYT, EDITH EVANS, M. A., Instructor in Education. <i>U. E. B. 211.</i>	24 Lathrop
HULL, CLARK LEONARD, M. A., Instructor in Psychology. <i>U. H. 18.</i>	820 W. Johnson
HUMBLE, MARION, Instructor in Children's Literature and Loan Administration, Library School. <i>Madison Free Library.</i>	219 Lathrop
HUNT, ADA ELEANOR, B. A., Instructor in Home Economics. <i>H. E. B. 115.</i>	310 N. Murray
HYLAND, PATRICK HENRY, B. S., Instructor in Machine Design. <i>E. B. 226.</i>	107 Spooner
IBSEN, HEMAN LAURITZ, Ph. D., Assistant in Experimental Breeding. <i>A. H. 313.</i>	Stock Pavilion
INGALLS, GEORGE ROSS, Ph. B., County Representative, College of Agriculture, Eau Claire County. <i>Training School.</i>	R. R. No. 6, Eau Claire
IRWIN, GEORGE PRYOR, Instructor in Business Administration. <i>U. E. B.</i>	University Extension Bldg.
JACKLIN, HAROLD MADISON, B. S., Instructor in Engineering. Superior District, Extension Division. <i>Columbia Bldg.</i>	807-16th St., Superior
*JAMES, THOMAS LOUIS, B. S., Instructor in Mechanical Engineering. <i>U. E. B. 303.</i>	2625 McKinley
JEROME, HARRY, M. A., Instructor in Political Economy. <i>S. H. 23.</i>	930 Clymer Pl.
JOHNSON, ALFRED JULIUS, B. S., Assistant in Chemistry. <i>C. B. 102.</i>	1015 University Ave.
JOHNSON, ARTHUR LOWELL, B. A., B. S., Assistant in Physics. <i>Sc. H. 105.</i>	309 N. Lake
JOHNSON, LAURENCE CRANE, Ph. D., Instructor in Chemistry. <i>C. B. 309.</i>	2018 Madison
JOHNSON, OWEN N., Assistant in Poultry Husbandry. <i>Poul. B.</i>	211 N. Mills
JOHNSON, WALTER EDMONDS, M. A., Instructor in English. <i>U. H. 361.</i>	803 State
**JONES, FRED RUFUS, B. S., Assistant in Agricultural Engineering.	
JONES, HUGH MEIRION, B. S., Assistant in Agronomy. <i>Branch Experiment Station, Ashland.</i>	Ashland.
JONES, MYRTLE EDITH, B. A., Assistant in Agricultural Economics. <i>A. H. 307.</i>	820 W. Johnson
JUDAY, WESLEY DENVER, B. S., County Representative, College of Agriculture, Oneida County. <i>Court House.</i>	103 E. King St., Rhinelander
JUVE, OSCAR A., B. A., Instructor in Agricultural Economics. <i>A. H. 308.</i>	1109 W. Washington Ave.
KALLEN, HORACE MEYER, Ph. D., Instructor in Philosophy. <i>U. H. 107.</i>	803 State

* Appointed February 24, 1917.

** Resigned January 17, 1917.

- KARTAK, FRANZ AUGUST, E. E., Instructor in Electrical Engineering. Director of Standards Laboratory. *Elec. Lab.* 203. 1415 W. Washington Ave.
- *KEISTER, DONALD CORMANY, M. B. A., Instructor in Business Administration. *U. E. B.* 213. 916 Van Buren
- KELLER, GRACE HARRIS, M. A., Assistant to Dean of Women. *Lathrop.* 306 Prospect Ave.
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- **KENNEDY, FRANK ALBERT, B. S., Instructor in Mining and Metallurgy.
- KEPHART, MARGARET, Assistant in Home Economics. *H. E. B.* 403. 217 N. Brooks
- †KILEY, WILLIAM EARL, Assistant in Physiology. *C. E. B.* 524 N. Henry
- KING, RICHARD S. C., Assistant in Physical Education. *Gym.* 803 State
- KINNE, BURDETTE INGERSOLL, M. A., Assistant in Romance Languages. *U. H.* 305. 214 N. Brooks
- KINNEY, SAMUEL MARKS, B. A., Assistant in Business Administration. *N. H.* 77. 740 Langdon
- KITCHEL, ANNA THERESA, M. A., Assistant in English. *U. H.* 353. 419 Sterling Pl.
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- KNAPLUND, PAUL, M. A., Assistant in History. *U. H.* 210 and *Lib.* 123. 1814 Kendall Ave.
- *KNOTT, ARTHUR WILLIAM, Student Assistant in Physical Education. *Gym.* 150 Langdon
- KOELKER, ELIZABETH STEELE, M. A., Assistant and Librarian, Municipal Reference Bureau, Extension Division. *U. E. B.* 103. 29 E. Wilson
- KOENIG, ALFRED EDWARD, Ph. D., Instructor in Chemistry. *C. B.* 106. 18 S. Bassett
- KOLB, ROLAND A., B. S., County Representative, College of Agriculture, Taylor County. Medford
- KRAATZ, WALTER CHARLES, Student Assistant in Zoology. *B. B.* 455. 325 W. Dayton
- KRANZ, HERMANN ERNEST, B. A., B. S., Instructor in Electrical Engineering. *U. E. B.* 310. 122 N. Orchard
- KRUEGER, LEONARD BAYLISS, M. A., Assistant in Political Economy. *Alumni B.* 508 W. Johnson
- KRUEGER, WALTER WILLIAM, Student Assistant in Zoology. *B. B.* 145 N. Butler
- KURCHENMEISTER, HUGO, B. A., C. P. A., Instructor in Business Administration. *N. H.* 80. 1606 Hoyt
- KUHLMAN, ARTHUR HENRY, M. S., Instructor in Animal Husbandry. *A. H.* 208. 124 Breese Terrace
- LAMMEL, ALLABELL, B. A., Assistant in Political Economy. *S. H.* 27. 415 Park

*Appointed December 6, 1916.

**Resigned January 30, 1917.

†Appointment for the second semester, 1916-17.

*Appointed January 30, 1917.

- LANGE, ERNEST OTTO ALBERT, B. S., Instructor in Electrical Engineering. *M. S.* 205. 1001 Regent
- LANGENHAN, HENRY AUGUST, M. S., Instructor in Pharmacy. *C. B.* 353. 1821 West Lawn Ave.
- LEE, ROBERT GUY, Field Man, Cooperative Work with State Printers, Extension Division. *U. E. B.* 213. 1721 Regent
- LEHMANN, HERBERT JAMES, Instructor in Industrial Subjects, Extension Division. *U. E. B.* 305. 124 W. Dayton
- LEVEN, MAURICE, Student Assistant in Political Economy. *S. H.* 24. 301 N. Murray
- LEWIS, FRED DICKERSON, B. S. Assistant to the Dean, College of Agriculture. *A. H.* 100. 740 Langdon
- *LEWIS, GORDON, Instructor in Physical Education. *Gym.* 218 N. Pinckney
- LIPPITT, LOUISA CHRISTIANA, Instructor in Physical Education. *Lathrop.* 419 Sterling Pl.
- LOFT, GENIVERA EDMUNDS, M. A., Assistant in Geology. *Sc. H.* 303. 1113 W. Dayton
- LOWE, JOHN NICHOLAS, Ph. D., Instructor in Zoology. *B. B.* 458. 1230 Chandler
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- LUNZ, HENRY, B. S., Instructor in Agronomy. *Agron. B.* 26. 1231 Mound
- LUSSKY, GEORGE FREDERIC, Ph. D., Instructor in German. *N. H.* 31. 512 N. Henry
- LYON, ALBERT EDDY, M. A., Instructor in Romance Languages. *U. H.* 320. 625 Mendota Ct.
- MCCARTHY, MARGARET MARY, Student Assistant in Public Speaking. *U. H.* 453. 135 W. Gorham
- MCCHESENEY, HARLAN DISBERY, Instructor in Physical Education. *Gym.* 615 1/2 W. Johnson
- MACDONALD, PHILIP WALTER, M. A., Assistant in History. *Lib.* 123. 419 Sterling Pl.
- MCINTYRE, ELWOOD RICHARDS, Assistant in Agricultural Journalism. *A. H.* 118. 220 Murray
- McKAY, JOHN GORDON, B. A., Instructor in Political Economy, Extension Division. Assistant in Political Economy, College of Letters and Science. *U. E. B.* 213. 271 Langdon
- McKEE, MARY ROSE, B. A., Instructor in Physical Education. *Lathrop.* 343 W. Main
- MACKINNON, ARCHIBALD RONALD, B. S., Assistant and Field Organizer, Milwaukee District, Extension Division. *University Extension Bldg., 471 Van Buren St.* 136 Farwell Ave., Milwaukee
- MACLEAN, JAMES DONALD, M. E., Instructor in Machine Design. *E. B.* 227. 610 Lake
- MALDE, OLE GUSTAV, Superintendent of the Cranberry Experiment Station. Grand Rapids
- MALONE, JULIAN YERKES, B. A., Assistant in Pharmacology and Toxicology. *C. E. B.* 302. 224 N. Murray

*Appointment for the second semester, 1916-17.

- MANDEL, HERBERT WILLIAM, Student Assistant in Political Economy. *N. H.* 82. 150 Langdon
- MANNING, HAZEL, B. S., Instructor in Home Economics. *H. E. B.* 223. 205 N. Pinckney
- MARKEY, WILLIAM E., Assistant in Animal Husbandry. *A. H.* 202. Stock Pavilion
- MARKWARDT, LORRAINE JOSEPH, B. S., Instructor in Drawing and Descriptive Geometry. *E. B.* 405. 412 N. Orchard
- MARSH, SAMUEL ALPHEUS, B. A., Instructor in Business Administration, La Crosse and Oshkosh Districts, Extension Division. *Burtis Bldg. 175 Main St.* 227 E. Beacon Ave., New London
- MARTIN, ALBERT PRAY, M. A., Assistant in German. *N. H.* 36. 1910 Madison
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- MATTSON, DONALD FREDERICK, B. S., Instructor in Dairy Husbandry. *H. S. H.* 101a. 610 N. Lake
- MILLER, CLARA JOSEPHINE, Assistant in Home Economics. *H. E. B.* 401. 12 Lathrop
- MILLER, MAUDE, B. A., Assistant in Botany. *B. B.* 203. 1624 Madison
- MILLER, NINA MARY REGINA, B. A., Assistant in Business Administration. *N. H.* 53. 12 Lathrop
- MILLER, SIDNEY LINCOLN, M. A., Assistant in Political Economy. *Alumni Bldg.* 418 N. Warren
- MITCHELL, ROBERT STEWART, M. A., Instructor in English. *U. H.* 361. 803 State
- *MOORE, ROGER EMMET, M. S., Instructor in Mathematics. *U. H.* 253. 202 S. Warren
- MORRIS, HAROLD HULETT, M. A., Assistant in Chemistry. *C. B.* 216. 423 Lake
- MORRISON, ROWLAND H., B. S., Instructor in Machine Design. *E. B.* 228. 1935 Rowley Ave.
- MORTIMER, GEORGE B., B. S., Instructor in Agronomy. *Agron. B.* 32. 145 Iota Ct.
- MURPHEY, HERMON KING, M. A., Assistant in History. *U. H.* 210. 312 Prospect Ave.
- MURRAY, REID FRED, B. S., Assistant Field Supervisor, Agricultural Extension Service. *A. H.* 104. 421 N. Lake
- MUSSEHL, FRANK EDWARD, B. S., Instructor in Poultry Husbandry. *Poultry B.* 30 Lathrop
- NEBEL, WALTER, M. S., Instructor in Chemistry. *C. B.* 309. 1726 Van Hise Ave.
- NELSON, VICTOR EMANUEL, M. S., Instructor in Agricultural Chemistry. *A. C. B.* 117. 414 W. Main
- NESBITT, RICHARD EARL, B. S., Instructor in Mechanical Engineering, Oshkosh District, Extension Division. *Burtis Bldg., 175 Main St.* 48-52 Jefferson Ave., Oshkosh
- NETHERCUT, MARY B., B. A., Assistant in the Library School. *Madison Free Library.* 22 E. Gilman

* Appointed February 24, 1917.

OFFICERS OF INSTRUCTION AND ADMINISTRATION 39

NEUMANN, JOHN XAVIER, B. S., Instructor in Bacteriology. <i>Sc. H.</i> 412.	615 Lake
NICHOLS, FRED CLIFFORD, B. A., Assistant in Physics. <i>Sc. H.</i> 105.	610 State
NICHOLS, PERRY F., B. A., Instructor in Business Administration. <i>U. E. B.</i> 213-215.	304 Breese Terrace
NOBLE, GEORGE BERNARD, B. A., Assistant in Political Science. <i>U. H.</i> 324.	1603 Jefferson
NOER, OYVIND JUUL, B. S., Assistant in Chemistry. <i>C. B.</i> 206.	145 Iota Ct.
OLDHAM, LESLIE LATHAM, B. S., County Representative, College of Agriculture, Walworth County.	Elkhorn
ORTEGA, JOAQUIN, Assistant in Romance Languages. <i>U. H.</i> 305.	302 Huntington Ct.
ORVIS, WILLIAM E., B. A., Assistant in Physics. <i>Sc. H.</i> 105.	202 N. Brooks
OWEN, RAY SPRAGUE, B. S., Instructor in Topographical and Highway Engineering. <i>E. B.</i> 104.	2120 Monroe
PAINE, GEORGE PORTER, M. A., Instructor in Mathematics. <i>U. H.</i> 61.	2115 Regent
PARSONS, HELEN TRACY, M. S., Instructor in Home Economics. <i>H. E. B.</i> 323.	214 N. Murray
PAYTON, MARTIN, Instructor in Foundry Practice. <i>M. S.</i> 345 W. Washington Ave.	
*PERLMAN, SELIG, Ph. D., Assistant in Political Economy. <i>Lib.</i> 118.	828 Mound
PETERS, CHARLES F., Assistant in Forge Practice. <i>M. S.</i>	1713 Monroe
PETERSEN, MAX HEINRICH, M. A., Assistant in Physics. <i>Sc. H.</i> 11F.	1621 Jefferson
PETERSON, OSCAR JOHN, B. A., Assistant in Mathematics. <i>U. H.</i> 253.	711 W. Dayton
PICKHARDT, EDWIN LOUIS, Student Assistant in Manual Arts. <i>U. H.</i> 219.	2240 Rowley Ave.
PITZ, WALTER, B. S., Assistant in Agricultural Chemistry. <i>A. C. B.</i> 103.	919 University Ave.
PLUNKETT, CHARLES TUCK, M. A., Assistant in Romance Languages. <i>U. H.</i> 305.	803 State
POST, CLINTON BLAINE, B. S., County Representative, College of Agriculture, Ashland County. <i>Court House.</i>	810-8th Ave. W., Ashland
**POTTER, GEORGE FREDERICK, B. S., Instructor in Horticulture. <i>H. B.</i> 107.	R. F. D. No. 7
PRINE, CHARLES WILSON, B. S., Assistant in Physics. <i>Sc. H.</i> 105.	207 N. Park
RAMENSTEIN, LEROY PIERCE, B. A., Assistant in Physics. <i>Sc. H.</i> 105.	610 State
RANEY, WILLIAM FRANCIS, B. A., Assistant in History. <i>Lib.</i> 123 and <i>U. H.</i> 210.	15 S. Mills
READ, JAMES BURTON, B. A., LL. B., Instructor in Business Administration. <i>U. E. B.</i> 213.	18 Lathrop

*Appointed January 30, 1917.

**In residence second semester, 1916-17.

- RICHARDS, CLARICE AUDREY, M. A., Assistant in Botany.
B. B. 209. 1212 W. Johnson
- RICHARDS, GRIFFITH, B. S., County Representative, College of Agriculture, Price County. Phillips
- RICHDORF, LAURENCE FRANCIS, Student Assistant in Clinical Medicine. Clin. B. 224 N. Murray
- RICKER, GEORGE WORCESTER, B. S., Assistant in History. Lib. 123. 803 State
- RITTER, GEORGE J., Ph. B. Assistant in Chemistry. C. B. 107. 708 W. Dayton
- *ROANTREE, ROBERT PETER, Student Assistant in Anatomy. Sc. H., 409. 224 N. Brooks
- ROARK, EUGENE WASHBURN, M. S., Assistant in Plant Pathology. H. B. 206. 139 W. Gilman
- ROARK, RAYMOND JEFFERSON, M. S., Instructor in Mechanics. E. B. 114. 139 W. Gilman
- ROBERTS, RAY HARLAND, M. S., Instructor in Horticulture. H. B. 103. 202 N. Brooks
- ROBINSON, FLORENCE, M. A., Assistant in Home Economics. Practice Cottage. 444 N. Warren
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- ROESLER, OSCAR EDWIN, M. S., Assistant in Chemistry. C. B. 101. 1216 W. Dayton
- **ROETHK, HARRY EDWARD, B. S., Assistant in Agricultural Engineering. A. E. B. 108a. 145 Iota Ct.
- ROMIG, ALBERT STANLEY, B. S., Instructor in Steam and Gas Engineering. E. B. 72. 809 Harrison
- †ROUSE, JAMES EDWARD, B. S., Assistant in Experimental Breeding. A. E. B. 313. 104 Lathrop
- RYAN, MARK EDWARD, Student Assistant in Anatomy. Sc. H. 409. 224 N. Murray
- SANDERS, MAMIE AMELIA, B. A., Assistant, Department of Debating and Public Discussion, Extension Division. U. E. B. 8. 1312 Spaight
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- SAWTELLE, DONALD WING, M. S., Assistant in Agricultural Economics. A. H. 318. 128 N. Orchard
- SAXER, ALEXANDER, B. A., Assistant in German. N. H. 36. 226 N. Brooks
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*Appointment for the second semester, 1916-17.

**Appointed January 17, 1917.

†Appointment for the first semester, 1916-17.

- SCHAPPER, FRED BYRON, B. A., Assistant and Field Organizer, LaCrosse District, Extension Division. *Long-fellow Bldg.* 6th and Vine Sts., LaCrosse
- SCHAUERMANN, KARL, B. A., Assistant in German. *N. H. 36.* 1821 University Ave.
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- SCHMIDT, AUGUSTUS OTTO, Instructor in Mechanical Practice. *M. S.* 531 State
- SCHUETTE, HENRY AUGUST, Ph. D., Instructor in Chemistry. *C. B. 317.* 803 State
- SCHUMANN, ROBERT NICKOLAS, Instructor in Forge Practice. *M. S.* 1109 W. Dayton
- SCHUSTEDT, FREDERICK NATHANIEL, Student Assistant in Topographical Engineering. *E. B. 53.* 1034 Jenifer
- SCHWADA, JOSEPH PHILIP, B. S., Instructor in Structural Engineering. *E. B. 309.* 215 N. Brooks
- SCHWEPPE, ALFRED JOHN, B. A., Assistant in English. *U. H. 353.* 1017 W. Johnson
- SCOTT, MILTON HARRISON, B. S., Assistant in Animal Husbandry. *A. H. 302.* 740 Langdon
- SCUDDER, CHARLES MORRISON, C. E., Instructor in Mechanics. *E. B. 215.* 408 N. Henry
- SEVRINGHAUS, ELMER LOUIS, B. A., Assistant in Chemistry. *C. B. 455.* 1015 University Ave.
- SHARP, DONALD ELLSWORTH, Student Assistant in Physics. *Sc. H. 105.* 819 Langdon
- SHAW, GEORGE ROBERT, M. A., Assistant in Chemistry. *C. B. 214.* 224 N. Brooks
- SILVERCRUYS, ROBERT F., B. es L., B. en D., Instructor in Romance Languages. *U. H. 308.* 803 State
- SIMMONDS, NINA, B. S., Assistant in Agricultural Chemistry. *A. C. B. 125.* 305 Lathrop
- SIMMONS, JOSEPH ELLSWORTH, B. S., Assistant in Agricultural Bacteriology. *A. H. 115A.* 813 Clymer Pl.
- SIMPSON, THOMAS MARSHALL, Ph. D., Instructor in Mathematics. *U. H. 253.* 1938 Kendall Ave.
- SKAVLEM, JOHN HARVEY, B. S., Instructor in Anatomy. *Sc. H. 402.* 224 N. Murray
- SMELKER, WILLIAM WALLACE, B. S., Assistant in Agricultural Engineering. *A. E. B. 102.* 1004 W. Washington Ave.
- SMITH, ELIZABETH ANITA, Ph. D., Instructor in Zoology. *B. B. 255.* 419 Sterling Pl.
- SMITH, GILBERT MORGAN, Ph. D., Instructor in Botany. *B. B. 13.* 1606 Hoyt
- SMITH, PEARL MABRY, M. A., Assistant in Botany. *B. B. 108.* 508 N. Frances
- SMITHEY, WILLIAM ROYALL, M. A., Assistant in Education. *U. H. 108.* 224 N. Brooks
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SPARR, WALTER EARL, B. A., Assistant in Political Science. <i>Lib.</i> 121.	724 W. Johnson
SPEICHER, PAUL, B. A., Assistant in English. <i>U. H.</i> 368.	708 W. Dayton
STEIGLEDER, EMIL OSCAR EUGEN, Assistant in Experimental Breeding. <i>Exp. Breed. B.</i>	Experimental Breeding Bldg.
STEIL, WILLIAM NICHOLAS, Ph. D., Instructor in Botany. <i>B. B.</i> 320.	2217 Hollister
STEINAUER, JOSEPH C., Assistant in Physical Education. <i>Gym.</i> 43	29 E. Wilson
STEVENSON, MARY GOODMAN, B. A., Instructor in Physical Education. <i>Lathrop.</i>	640 N. Frances
STRASSER, WILLIAM, Student Assistant in Anatomy. <i>Sc.</i> <i>H.</i> 402.	224 N. Murray
SUMNER, WILLIAM ALLISON, B. S., Instructor in Agricul- tural Journalism. <i>A. H.</i> 13.	217 S. Hamilton
SURE, BARNETT, B. S., Assistant in Agricultural Chemistry. <i>A. C. B.</i> 3.	610 University Ave.
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SWOBODA, FRANK GEORGE, B. S., County Representative, College of Agriculture, Langlade County. <i>Courthouse.</i> 1319 Clermont St., Antigo	1319 Clermont St., Antigo
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TAYLOR, EDWARD GORDON, B. S., Assistant in Physics. <i>Sc. H.</i> 105.	119 W. Gorham
TAYLOR, EUGENE, M. A., Instructor in Mathematics. <i>U. H.</i> 67.	16 Lathrop
TAYLOR, JOSEPH VINCENT, B. S., Assistant in Physiology. <i>C. E. B.</i> 302.	224 N. Murray
THAYER, VIVIAN TROW, B. A., Assistant in Philosophy. <i>U. H.</i> 107.	450 W. Gilman
THIESSEN, FRANK CARLTON, B. S., Instructor in Civil and Structural Engineering. <i>U. E. B.</i> 308.	105 Spooner
THOMAS, CHARLES W., B. S., Instructor in Drawing and Descriptive Geometry. <i>E. B.</i> 405.	Nakoma
THWAITES, FREDRIK TURVILLE, M. A., Curator of Geo- logical Museum. <i>Sc. H.</i> 212B.	R. F. D. No. 4
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**TRAUTMAN, WILLIAM JOHN, Ph. B., Assistant in Chemistry. <i>C. B.</i> 105.	1212 W. Washington Ave.
TRUEBLOOD, CHARLES KINGSLEY, M. A., Instructor in English. <i>U. H.</i> 370.	803 State
†TUPPER, WARREN ERNEST, Student Assistant in Anatomy. <i>Sc. H.</i> 409.	224 N. Murray
TURNER, ANNABELL, B. S., Instructor in Home Econ- omics. <i>U. E. B.</i> 214.	200 S. Mills

*Resigned December 6, 1916.

**Appointed January 17, 1917.

†Appointment for the second semester, 1916-17.

- TURNER, JENNY AVIS, Instructor in Home Economics.
H. E. B. 403. 425 Sterling Pl.
- TURVILLE, HELEN, B. A., Instructor in Cataloguing, Classification and Library Economy, Library School.
Madison Free Library. R. F. D. No. 4
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- VAIL, HARRY E., Instructor in Physical Education. *Gym.*
1E. 312 W. Washington Ave.
- VALENTINE, HOWARD DEWITT, M. S., Instructor in Chemical Engineering. C. E. B. 104. 1015 University Ave.
- VANDER BIE, CHAUNCEY LEAREN, Student Assistant in Zoology. B. B. 354. 433 W. Gilman
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In charge of Registrations, Correspondence-Study Department. U. E. B. 107. 508 N. Frances
- VAN LIERE, EDWARD JERALD, B. A., Assistant in Zoology.
B. B. 153. 615 Lake
- VAUGHAN, FLOYD LAMAR, M. A., Assistant in Political Economy. S. H. 23. 431 Lake
- VERRILL, RAY MARSHALL, M. A., Instructor in English.
U. H. 370. 803 State
- WAKEMAN, HATTIE JOSEPHINE, Artist Technician in Zoology. B. B. 252. 1814 Ray
- WAKEMAN, NELLIE ANTOINETTE, Ph. D., Instructor in Pharmacy. C. B. 356. 1814 Ray
- WALKER, JOHN CHARLES, M. S., Assistant in Plant Pathology. *Pathologium.* 450 W. Gilman
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Sc. H. 105. 419 N. Murray
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B. 205. 2017 Kendall Ave.
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* Appointed February 24, 1917.

**Appointment for the first semester, 1916-17.

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- WILLIAMSON, ROBERT CROSIER, B. A., Assistant in Physics. *Sc. H.* 3. 1633 Monroe
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- WINN, CLARENCE CLYDE, M. S., Instructor in Electrical Engineering, La Crosse District, Extension Division. *Longfellow Bldg.* 6th and Vine Sts., La Crosse
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- WOOD, FREDERICK, M. A., Instructor in Mathematics. *U. H.* 67. 710 W. Dayton
- WOODWORTH, CLYDE MELVIN, M. S., Assistant in Experimental Breeding. *A. H.* 310. Stock Pavilion
- WRIGHT, ANDREW HAMILTON, M. S., Instructor in Agronomy. *Agron. B.* 34. 202 Prospect Ave.
- WYATT, RALPH M., Student Assistant in Physical Education. *Gym.* 1E. 627 N. Lake
- YORK, MIRA ELIZABETH, Assistant Department of Visual Instruction, Extension Division. *U. E. B.* 311. 1906 Monroe
- YOUNT, COURTLAND MATSON, M. A., Assistant in Political Science. *U. H.* 324. 401 N. Murray
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- GANGSTAD, IDA MARIE, B. A., Library Assistant, Department of Debating and Public Discussion, Extension Division. *U. E. B.* 6. 613 N. Frances

*Resigned January 17, 1917.

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BROOKINS, JULIA LOUISE CLARKE, M. A., Teacher of English. W. H. S. 210.	214 S. Henry
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*RUBADO, CLARENCE ARTHUR, Teacher of Mathematics. W. H. S.	
**SHAFFER, MAUDE MARGARET, Ph. B., Teacher of Mathematics.	
SKINNER, MARGARET MERON, Teacher of English. W. H. S. 211.	134 W. Gorham
STRANG, ANNA HOLDEN, M. S., Teacher of Science. W. H. S. 311.	419 Sterling Pl.
VOSS, AURIE HEDRICK, Teacher of Mathematics. W. H. S. 106,	175 Nelson Road

OTHER OFFICERS

THORKELOSON, HALSTEN JOSEPH, M. E., Business Manager. Adm. B.	1526 W. Washington Ave.
MCCAFFREY, MAURICE ERVE, Secretary of the Regents. Adm. B.	1904 Jefferson
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HYDE, GRANT MILNOR, M. A., Editor, Press Bulletin. S. H. 32 and 39.	415 N. Park
LABISKY, ARTHUR H., Purchasing Agent. Adm. B.	29 E. Wilson

*Appointed January 30, 1917.

**Resigned January 30, 1917.

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Press Bulletin—Professor Hyde.

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Oratory and Dramatics—Professor O'Neill, chairman; Professor Gertrude Johnson and Mr. Bonnell.

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Society, Fraternities, and Politics—Professor C. E. Allen, chairman; Professors Otto and Root.

Training of Teachers—Professor Henmon, chairman; Dean Birge; Professors K. Allen, Crawshaw, Gilbert, W. W. Hart, James, Kind, Lenher, Manchester, Marlatt, H. L. Miller, O'Shea, Sharp, and Westermann.

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Soils,	PROFESSOR WHITSON.
Veterinary Science,	ASSOCIATE PROFESSOR HADLEY.

*On leave of absence, academic year, 1916-17.

HISTORY AND GOVERNMENT

In the settlement of the pioneer regions of the United States, it very early became the established practice to set apart a share of the unoccupied land for the support of an institution of higher learning. Immigrants were thus assured that the opportunities of an advanced education would not be denied the children of the new community because the founders of it had ventured into the wilderness. This system, conceived in a spirit of statesmanship at once high and prudent, tended to draw an intelligent body of citizens into the region which was being settled, and to set at work forces which would be felt in the permanent elevation of the tone of public education. Thus in 1836, the first year of the territory of Wisconsin, steps toward the establishment of a university were taken by the territorial legislature. In 1839, the National Congress granted to the territory two townships of public land "for the use and support of a university"; and in 1848, when Wisconsin was applying for admission to statehood, provisions for the university were written into the constitution laid before Congress.

The state was admitted May 29, 1848; the necessary legislative acts providing for the organization of the University were approved July 26 of the same year; and the first Board of Regents met at Madison in October. The new state had nothing with which to endow the new institution but the unsettled land already granted to it. The Regents, therefore, had before them the choice between two courses;—to sell the lands at low prices in competition with the other wild lands of the state, or to refrain from selling until the increase of population should have raised the value of the university property to a substantial amount. The one course would sacrifice the material endowment; the other would prevent the state from benefiting by the influence of the University in its formative years. The Regents, wisely, as the history of the state has proved, determined to open the institution without delay. The financial operations which followed have been severely condemned, but there can be no question that the intelligent bounty of the state legislature

has afforded the University a safer and a far more generous support than the largest possible endowment that could have been secured by the conservative management of the land of the institution. Moreover, the direct dependence of the University upon the legislature has made it a part of the life of the state in an intimate way, and by making higher education a practical matter for all citizens, has performed a useful service as an element in raising political questions above a merely material plane.

The new institution began instruction in February, 1849. It bore the name of a University, but had in operation only a preparatory school of twenty pupils, under the tuition of John W. Sterling, a graduate of Princeton, who bore the title of Professor of Mathematics. Professor Sterling gave a life of sacrificial devotion to the institution as it added to its academy a little college, and as the little college carried on its struggling and painful life. He was happy enough to live until the University began to assume proportions worthy of its ambitious name. The chancellor, John H. Lathrop, a graduate of Yale, called from the presidency of the University of Missouri, entered upon his duties in the autumn of 1849. He was a man whose plans were genuinely large and at the same time definite but were in the main never realized because of the paucity of funds. He insisted upon maintaining a solid classical course as the nucleus about which all possible future developments were to be gathered but which was never to be sacrificed to any other objects, however plausible they might seem and however much he desired to meet them. Under his administration (1849-1858) the faculty grew to seven members, and some systematic instruction was given in modern languages, English literature, the art of teaching, and agriculture, as well as in ancient languages, mathematics, and philosophy. The college was bitterly criticized. There was a feeling abroad, vague but insistent, that the University did not do for the community what it should. A "practical" education was wanted, without any clear idea of what a practical education might be, or how expensive the equipment for it must be. Chancellor Lathrop resigned, and after a few months, during which the well known educational theorist, Henry Barnard, then in ill health, held the title of chancellor, the administration lapsed into the hands of the faculty, Professor Sterling presiding as vice-chancellor. The dark days of the civil war followed. The professors lived on half pay. Many of the students took their place in the army, so that in 1864 no commencement exercises were held, only one of the senior class being in residence.

The maintenance of the institution during these days of struggle had this important effect—that a center and a tradition were created. The material beginning of the University may fairly be said to be the grant under the Morrill act (1862) for the support of a college of agriculture and mechanic arts “without excluding other scientific and classical studies.” This noble statute bears evidence of the influence of the civil war in that it made instruction in military tactics a condition of the continuance of the grant. The very smallness of the literary college perhaps made it the more natural to amalgamate the new institution with the old, and thus to give to the University of Wisconsin its peculiar character. In the state all types of highest instruction, whether liberal, professional, or technical, are given by the one institution. A school of music and the beginnings of a school of decorative art have since been added; and in addition many scientific bureaus are administered in close relation with the University. The University of Wisconsin has accordingly a very great diversity of functions and a very complex organization. In this way unseemly rivalries among institutions of higher learning conducted by the state have been avoided and the conception of instruction within the University has been in some departments liberalized and in others elevated.

The reorganization of the institution after the acceptance of the Morrill grant was carried out under the vigorous presidency of Dr. Paul A. Chadbourne of Williams College (1867–1870). A department of agriculture and a college of law were established in 1868; steps were taken toward the acceptance of women students on an equality with men; and the legislature began, first of all, to appropriate moneys to compensate for the impairment of the university fund, later assumed the responsibility of providing necessary buildings, and finally took the step of voting direct taxes for the support of the University. At the same time a system bringing the University into close relations with high schools in the state was organized. The presidency of Dr. John H. Twombly (1871–1874) followed that of Dr. Chadbourne.

The foundations of the University had now been laid, and the policy of including within it a group of technical and professional colleges, as well as a strong college of liberal arts, had been determined upon. During the presidency of Dr. John Bascom (1874–1887) the University was developed into a firmly organized and well equipped teaching institution, was brought into close and orderly relations with the other public schools of the state, and was made a moral force in the lives of its students and of the community. Dr.

Bascom found the recognition of co-education half-hearted and ambiguous and made it distinct and complete. He found the income deficient, the buildings, the library, and the scientific apparatus inadequate, and the faculty too small for the proper division of departments and the maintenance of high standards. In every point the institution was put on a sound basis. Buildings were erected and satisfactorily equipped, especially for the science departments. The library was enlarged. The faculty became a body of specialists, and not of general teachers. Dr. Bascom more than any other man was responsible for the increase in income which made this progress possible, by the creation of a ratio tax, established in 1876 in the proportion of one-tenth mill to each dollar of the property valuation of the state. The system has been maintained with few interruptions and with liberal increases ever since. Finally the free high schools, the establishment of which was promoted by an act of 1875, granting state aid to such institutions, were bound to the University by a system of accrediting their graduates on the one hand, and on the other by the recognition of the university degree as a qualification for a certificate to teach in the public schools of the state.

In the administration of Dr. Bascom's successor, Dr. Thomas Chrowder Chamberlain (1887-1892), a graduate of Beloit College, the strong college of Dr. Bascom began to grow into a true university. In all ways graduate work assumed a place as an active part of the institution. Scholars with the ideals of research brought from Johns Hopkins or from Germany were added to the faculty. The first university fellowships were established. The degree of Doctor of Philosophy was offered. A new organization, into the Colleges of Letters and Science, Engineering, Agriculture and Law, effected in 1889, testifies to the growing vigor and more distinctly understood aims of the professional and technical institutions. Intercollegiate debates and athletics and "student activities" began to be heard of; and in brief the tendencies which have resulted in the conditions of the present day showed themselves definitely.

During the presidency of Dr. Charles Kendall Adams (1892-1901) these tendencies became dominant. A large armory and gymnasium was built. An athletic field was acquired,—Camp Randall, the historic encampment where the Wisconsin troops were concentrated during the civil war. The University became socially more complex. A dean of women was appointed. A school of music and a choral society were established. In every way the institution developed. The colleges of law and of engineering grew

rapidly, and had to be provided with new buildings. The fields of political, economic, and social science and of history were greatly strengthened. The University had become very definitely the recognized culmination of the public instruction of the state, and was resorted to in increasing numbers by graduates of the state normal schools. The institution was cramped for want of room; and though the increases in building and equipment were rapid, they barely kept pace with the enormous growth in the number of students. The crowning achievement of Dr. Adams's administration was the erection on university ground of a building to house, with the University library, the library of the State Historical Society,—a reference library of great value, and in some aspects unique. The improvement of the facilities placed at the service of the University by the opening of the library, which took place in 1900, marks an epoch in the history of the institution.

Dr. Adams's health failed in 1900; and from that time to 1903, with but a few weeks of interruption, Dr. Edward Asahel Birge, for many years a member of the faculty and then Dean of the College of Letters and Science, was acting president. Throughout the entire period the increase in numbers and the corresponding development of the work of the institution went on uninterruptedly.

Charles Richard Van Hise, Professor of Geology, was the first alumnus of the University to be called to the presidency, which he assumed in 1903 and still occupies. The material progress of the institution has continued under his administration. The College of Agriculture has become an important teaching college, as well as an institution of research. A course in Home Economics has been created; the first two years of a Medical Course are given. Courses in Journalism, in Chemistry, for the Training of Teachers, have been established, while the older similar School of Commerce, now denominated a Course, continues to thrive. Lagging somewhat behind these advances have come the material provisions for them, so that the University remains crowded. The mere enumeration of the newly organized courses illustrates the fact that during the administration of the present incumbent, the tendency of the University to accentuate professional equipment rather than a liberal culture has suffered no abatement. At the same time, the work of the departments of the humane arts and the pure sciences constitutes the largest single part of the activity of the University, and the opportunity and the ideal of liberal culture are maintained with energy.

The University of Wisconsin is the culmination of the free educational system of the state. In the educational polity of the state, the University is related to the high schools as are the high schools to the primary and grammar schools. It is not expected that all pupils who complete the grammar grades will advance to the high school; nor is it expected that all who complete a high school course will go forward to the University. But the school system of the state has been so arranged as to make advancement from one step to another as easy and natural as possible. The University encourages in its teachers and advanced students research, including learning, investigation, and the application of scientific knowledge to the arts of life. Its largest work is to disseminate knowledge through the systematic discipline of organized courses to resident students, both in liberal and professional study. In addition, the University, through an Extension Division organized upon the broadest basis, assists those who for any reason cannot become resident students, to enjoy the benefits of its facilities and equipment, with the fewest possible restrictions.

The University is supported partly by the income of federal grants, partly by taxation of the people of the state, partly by student fees, and to a slight extent by private gifts. There have been seven federal grants, namely: the Two-Township Grant of 1848; the Supplementary Two-Township Grant of 1854; the Morrill Grant of 1862 for the support of studies pertaining to agricultural and mechanic arts; the Hatch Grant of 1887 for the support of agricultural experiment stations, the Supplementary Morrill Grant of 1890; the Adams Grant of 1906; the Nelson Grant of 1907; and the Smith-Lever Grant of 1914, for the promotion of extension work in agriculture and home economics.

Besides numerous and large appropriations for buildings and other scientific purposes, the state of Wisconsin has made a number of continuing grants. The first was the one-tenth mill tax of 1876. The principle of this tax was once temporarily abandoned, but has been recurred to by the legislature, the present ratio being three-eighths of a mill on the dollar.

Of the gifts that have come to the University from individuals, that of Dane County for the purchase of lands for the University farm, that of the late Governor C. C. Washburn for the founding of the Washburn Observatory, that of the late Judge Mortimer M. Jackson for the establishment of the Mortimer M. Jackson Professorship of Law, that of the late Dr. C. K. Adams and Mrs. Adams,

for the foundation of fellowships, and that of Mrs. Fannie P. Lewis for the foundation of scholarships for women, are important. On August 27, 1908, Colonel William F. Vilas, who for fifty years had been deeply interested in the University as student, as regent, and as citizen, died. His entire estate was bequeathed to the University, the income, however, in part, or whole if need be, to go to his wife and daughter during their lives. Half of the income of the estate is to be used for the support of research professorships, fellowships, and scholarships and the remainder to increase the principal. While it will be many years before the University gains financial assistance from this bequest, its influence for the development of the University along the highest lines cannot but be felt at once.

In 1911, friends of the University created the Carl Schurz Memorial Foundation, with the object not only of perpetuating the memory of Carl Schurz, the German-American statesman and patriot, who at one time was a resident of the state and a regent of the University, but of promoting cultural and scholarly relations between Germany and America. A fund of \$30,000, contributed mainly by Wisconsin citizens of German descent, was given in trust to the Regents of the University for "the maintenance of a Professor's Chair in the State University to be known as the 'Carl Schurz Memorial Professorship,' which is to be filled from time to time and for such lengths of time as will be found advisable by visiting professors of recognized character and standing from the universities of Germany." The first incumbent of the chair was Professor Eugen Kühnemann of the University of Breslau, who gave courses of lectures on German literature during the first semester of 1912-13. He was succeeded in 1914-15 by Professor Moritz Bonn of the University of Munich, who lectured on economic subjects.

A striking mark of good will toward the University has been very recently manifested by the bequest made by the late J. Stephens Tripp, banker, of Prairie du Sac, who died July 23, 1915, at the age of eighty-seven. Mr. Tripp made the University residuary legatee of his estate of approximately \$400,000. The bequest is chargeable with certain annuities, and like Colonel Vilas's, will not become available for a number of years. The fact that it is absolutely free from limitations or restrictions of any kind makes it stand out as a remarkable expression of confidence in the permanent administration of a great public educational trust.

The government of the University is vested in the Board of Regents, who possess all the powers necessary to accomplish the

objects of its establishment and to perform the various duties prescribed by law.

The Regents, appointed by the governor of the state, include one member from each of the eleven congressional districts, and two from the state-at-large. At least two of the members are women and the President of the University and Superintendent of Public Instruction are ex officio members of the Board.

The Regents appoint all administrative officers and faculty members, and all faculty rules regarding the government of students are subject to their approval.

The University Faculty exercises authority, subject to the approval of the Board of Regents, in all matters relating to educational policy, scholastic standards, and, in general, the relation of students to the University.

All members of the staff of instruction with the rank of assistant professor or above constitute the governing faculty, with power to take action on questions within the jurisdiction of that body. Other members of the staff of instruction have a voice but no vote at all meetings of the University Faculty, with the exception of executive sessions.

The faculty of each college, school, or division is similarly organized for the purpose of administering matters relating solely to its own unit of organization.

DESCRIPTION

By the provisions of the constitution of the state of Wisconsin the University must be located at or near the state capital, afterwards fixed at the "village of Madison." The founders of Madison intelligently adapted the original plan of the city of Washington to local conditions, selecting an eminence in the center of the city for the site of the capitol, and laying out radial thoroughfares approaching it so that it closed the vista from every direction. A mile to the west, at the end of one of these radial streets, on a second elevation rising abruptly to a height of more than a hundred feet above the south shore of Lake Mendota, the principal building of the University was erected, thus closing the view from the capitol in that direction. This building, University Hall, was constructed in the simple and dignified modification of classical renaissance architecture accepted in America since colonial times. The building, much enlarged, but in a manner harmonious with the original design, still remains the center of the University. From University Hall a broad open avenue lined with elms, the "Upper Campus," sweeps downward to the street which leads through the town from the capitol. Until recently the main buildings of the various colleges and professional schools, each one in the style prevailing in this country at the time of its erection, were placed on either side of the avenue, and outward from it north and south along the eastern border of the university grounds. Here for example are the recitation buildings and laboratories of the College of Engineering and the Law and Medical Schools, and all but the most recent buildings of the College of Letters and Science. Later in the history of the University it was found seriously inconvenient to erect all the buildings on the slopes of hills, and lands were acquired in the low and level part of Madison to the eastward of the Upper Campus, and near the lodgings of the body of students. Here there is now a group of buildings, for example the offices of the medical staff, the infirmary, the administration building, and the president's house, which are so intimately connected with the general activities of the University that they must be of easy access. The gymnasium and armory stands here on the lake shore, with the plant for aquatic

sports behind it and an open space covering an acre and a half before it,—the “Lower Campus,”—which is utilized as a parade ground and for such athletic sports as do not require the ample area of a regular athletic field. Of all the buildings on this part of the university grounds the most notable,—the most stately of all the buildings connected with the work of the University,—is the Library Building, which houses the library of the State Historical Society and also the library of the University—an edifice of Bedford limestone with a colonnade and terrace of much beauty and dignity fronting the Lower Campus.

The street along the southern edge of the University Hill is now in great measure built up by recently constructed buildings, the most impressive of which is Lathrop Hall, the woman's building, containing a spacious modern gymnasium and swimming pool, a refectory, and accommodations for the social life of the women of the University, and the offices of administration concerned especially with women students. It is built of buff sandstone in a style similar to that in the earlier buildings, but somewhat more ornate, and with its long and lofty façade standing at the top of a high flight of steps and in part flanked by smaller buildings it is next to University Hall the most striking of all the buildings of the University.

About a quarter of a mile to the west of the height on which University Hall stands is a second summit of the ridge, crowned by the Washburn Observatory. On the southern and western slopes of this second hill are the buildings of the College of Agriculture which are used for instruction. The experimental farm of the University, used mainly for experiments in detail with crops and feeding, is in the main on level or slightly sloping ground to the west of Observatory Hill. About the southern and eastern edges of it are the various barns: the horse barn, the dairy barn, the sheep barn, the poultry buildings, and the other buildings required by the College of Agriculture, especially for its demonstration work, such as the Dairy Building and the Horticultural Building. Of all these the most notable is the Stock Pavilion, containing an oval amphitheater with a seating capacity for two thousand people, and an earthen arena for exhibition purposes covering over 10,000 square feet.

The grounds already in part occupied by buildings, 100 acres in all to the edge of the Experimental Farm, will no doubt in the course of no very long time be entirely devoted to the buildings required for purposes of instruction. In addition, the University owns lands along the shore of the lake to the west, mainly uplands

with a diversified surface now used as a general farm, and for experiments on a large scale in farm administration and tillage.

The athletic field, forty-two acres in extent, is at some distance to the south of the agricultural buildings. The field includes satisfactory football and baseball grounds, with a running track, tennis courts, and archery grounds. Plans for extensive improvements, including the erection of a modern stadium, have been adopted and will soon be in operation.

The total area of the grounds of the University is not much less than one thousand acres. They are of marked natural beauty, and provide for the probable increase of the University in a far-sighted way. The grounds have a special archaeological interest because of the abundance in and near Madison of the so-called Indian effigy mounds. These are small mounds of earth in the form of animals and other totems, made by the Winnebago and allied native tribes in prehistoric periods, and are unique, being found only in Wisconsin and along the boundaries of the state to the west and south.

The classroom facilities of the University although on the whole adequate are greatly crowded in some departments. The scientific departments are provided with the necessary equipment of auditoriums, classrooms, and laboratories, large and small, fitted for elementary and advanced classes, with special laboratories for research students, and with a number of private laboratories for the investigations carried on by the staff. They have in all cases the necessary equipment for the instruction which they offer and facilities for further special research upon which graduate students may enter. Detailed accounts of the equipment of the Colleges of Engineering and Agriculture are given in the announcements of these colleges.

The museums of the University are in the main working illustrative collections for use in connection with the instruction of the departments. The collection of chemical manufactures includes the products of a number of the most important European and American establishments. The drug collection contains some five thousand specimens for illustrative purposes contributed mainly by manufacturers, being especially noteworthy for its collection of drugs of Asiatic origin, particularly Malay and Ceylonese drugs and medicines. The herbarium, which has grown from the collection purchased from the estate of I. A. Lapman of Milwaukee as a nucleus, is now especially rich in Wisconsin flowering plants and

fleshy fungi, and contains an almost complete collection of North American mosses.

The geological museum contains extensive systematic collections for exhibition and for use in instruction, including carefully planned general and special collections of minerals, rocks, ores, and fossils. The display exhibits are particularly ample in illustrating the origin and formation of rocks. The main body of specimens in the division of rocks consists largely of the Hobbs collection of European igneous rocks including over twenty-five thousand thin sections. The department under the laws of the state also receives the rock collections of the present State Geological Survey, and has in addition the use of nearly seventy thousand specimens and twenty thousand thin sections belonging to the United States Geological Survey, which were collected during studies of the Lake Superior region. A few only of the type fossils described by the former Geological Survey of Wisconsin escaped the fire which destroyed the collection of that organization in 1884, but the losses are being gradually replaced.

The museum of the State Historical Society, which though not administered by the University, is open to the use of its students for purposes of study and research, makes a specialty of the archaeology and social history of the western Indians, and of western pioneer life, especially in Wisconsin, and is notable for its collections illustrating the early history of the upper Mississippi valley.

The art museums belonging to the University or accessible to its students are not yet developed. The Art Museum of the Historical Society contains a number of modern pictures of merit, a collection of Piranesi's etchings of classical ruins, and a number of good prints and reproductions valuable for study. By the gifts of alumni and friends, and the loans of Professor Paul S. Reinsch, the University is in possession of a collection of almost two hundred valuable paintings as an art nucleus.

LIBRARIES

The libraries at Madison, all of which are at the service of members of the University, are six in number, viz., the Library of the University of Wisconsin, the Library of the Historical Society of Wisconsin, the Library of the Wisconsin Academy of Sciences, Arts, and Letters, the State Law Library, the Legislative Reference Library, and the Madison Free Library. These libraries duplicate books only to supply exceptional demands, and have an effective strength approximately equal to the whole number of volumes possessed by them. The total number of bound volumes in all the libraries is about 547,000 and the number of pamphlets exceeds 290,000.

The first three libraries above named are housed in the library building of the State Historical Society on the lower campus of the University. This building, erected by the state of Wisconsin, affords most convenient accommodations for students. In the planning of the building, the especial needs of the University were consulted.

In the south half of the first floor are located three department libraries of the Historical Society, viz., documents, newspaper files, and maps and manuscripts. In the north end of this floor is a series of six seminary rooms, allotted to American history, European history, political economy, political science, mathematics, and Semitic languages. The greater part of the second or main floor is occupied by the general reading room and the periodical room, which are used in common by the two libraries. In these rooms two hundred and seventy-five readers may find accommodation at one time. In open cases in the reading rooms are shelved several thousand general reading, reference, and "reserved" books. To these, as well as to the large collection of general periodicals in the periodical room, all readers have direct access. The main portions of both libraries are stored in the stack wings adjoining the delivery room on the west. Officers of the University have direct access to the shelves in all parts of the library, and students engaged in advanced work, upon recommendation of their instructors, are allowed access to those parts of the collection dealing with their special subjects.

The administrative rooms of the Historical Society and of the University Library are situated at the south and north ends of the

second floor respectively. The north end of the third floor is occupied by six seminary rooms for the subjects of philosophy and education, Latin, Greek, and modern languages and English. The museum and gallery of the Historical Society occupy the fourth floor. The library is open fourteen and one-quarter hours daily, during the academic year, except on Sundays and legal holidays.

The Library of the University of Wisconsin, including its branches, contains about 248,000 volumes and 51,000 pamphlets. The catalogue is the usual dictionary card catalogue of authors, subjects, and titles in one alphabetical arrangement. Subject to certain restrictions, books may be drawn by all members of the University. Every matriculated student of the University for the regular year is required to make a library deposit of \$1.00, as per statement on page 66. This deposit, less charges for fines and damages, is returnable to the student by the bursar upon graduation or earlier withdrawal from the University.

The Law School has a special library of 26,000 volumes; and the Washburn Observatory is provided with the Woodman Astronomical Library, now containing 2,600 books and 2,800 pamphlets. The agricultural library of about 16,000 volumes is located on the first floor of Agricultural Hall. The engineering library is located on the first floor of the Engineering Building.

The Library of the State Historical Society contains over 197,000 volumes and 203,000 pamphlets. While strong in all fields of American history and allied subjects, it is especially rich in manuscript and other material for the study of the history of the Mississippi valley. Its collections in English history are among the most extensive in this country.

The Library of the Wisconsin Academy of Sciences, Arts, and Letters, comprising about 5,000 volumes, is a valuable collection of reports and transactions of learned societies. It is located in the Library Building, and constitutes a useful supplement to the other libraries in this special field.

The State Law Library in the Capitol numbers about 60,000 volumes.

The Legislative Reference Library in the Capitol numbers about 35,000 volumes, pamphlets, and collections of clippings. This library collects information on all subjects of legislation. The material is largely in the field of political science and political economy.

Students are allowed to draw books from the Madison Free Library, a well selected collection of over 37,000 volumes.

EXPENSES

No resident tuition is charged except in the Library School and the Wisconsin High School.

	Nonresident Tuition**	Incidental Fee
COLLEGES OF LETTERS AND SCIENCE, AGRICULTURE (LONG and MIDDLE COURSES), ENGINEERING, LAW, MEDICAL, and GRADUATE SCHOOLS, and SCHOOL OF MUSIC***, per semester.....	\$62.00	\$12.00
Library deposit required of all students upon entrance, \$1.00. See p. 65.		
COLLEGE OF AGRICULTURE		
Short Course, per course.....	48.21	6.50
Dairy Course (Winter), per course.....	41.33	6.50
(Summer) 5 wks. minimum, per week.....	3.45	6.00
SUMMER SESSION		
Graduate School; Colleges of Letters and Science, Engineering, Agriculture (6 weeks).....		15.00
Law School; College of Agriculture (10 weeks).....		25.00
Field Courses; farm management (6 weeks).....		15.00
geology (4 weeks).....		20.00
mining and metallurgy (4 weeks).....		10.00
topographical engineering and surveying (4 weeks).....		7.00
Extra weeks beyond the regular session, per week.....		2.50
LIBRARY SCHOOL, resident tuition, \$25 per semester****.....	50.00	
WISCONSIN HIGH SCHOOL, † per quarter		
6th and 5th classes, resident tuition, \$6.00.....	15.00	
4th, 3rd, 2nd, and 1st classes, tuition, \$8.00.....	15.00	

† Four quarters of twelve weeks each constitute the complete year. At present (1917) the high school is in regular session but three quarters.

Laboratory Charges

Charges are made in the various laboratories to cover the expense of material consumed. Unless otherwise noted, charges are for one semester only. A laboratory credit equals two hours per week of laboratory work.

		Fee	Deposit
COLLEGE OF LETTERS AND SCIENCE			
Botany—	Per laboratory credit.....	\$1.00	
	Key and breakage deposit, per course..		\$.50-1.00
	Except: 110; 111, each.....	2.00	1.00
	146.....	4.00	2.00
	Research students.....	2.50	
Chemistry—	1, (2nd semester \$10.00).....		15.00
	2, per year.....		15.00
	11.....		17.50
	120.....		20.00
	130; 146, each.....		15.00
Other courses—materials used.			
Geology—	1, 3, 4, each.....	1.00	
	6, 7, each.....	4.00	
	8, 114b, 140, each.....	2.00	
	121.....	1.50	
Manual Arts—	Shop laboratory courses, per credit.....	2.00	
	51.....	1.50	
	70, 71, add breakage deposit.....		2.00
Physics—	Per laboratory credit.....	2.00	
Political Economy—Accounting—materials used.			
Psychology—	103, 104, each.....	2.00	
	105, \$5.00 per year, per semester.....	3.00	
Zoology—	1a.....	4.50	.50
	1b, 102a, each.....	5.50	.50
	3, 104b, 105, 108, each.....	3.50	.50
	4, 9, 19, 110, each.....	2.00	.50
	11, 116, each.....	4.00	.50
	20.....	1.00	.50
	21.....	1.50	
	104a.....	6.50	.50

COLLEGE OF AGRICULTURE

Per laboratory credit.....	1.00	
Breakage deposit, per course.....		3.00
Short Course, per course.....	7.00	2.00
Dairy Course, winter, per course.....	10.00	2.00
summer, per course.....	5.00	2.00

COLLEGE OF ENGINEERING

Assaying (Mining 121).....	15.00
Other courses, per laboratory credit.....	2.00
Laboratory Theses, per course.....	5.00

	Fee	Deposit
MEDICAL SCHOOL		
Anatomy—105; 115; 122; each.....	\$5.00	
110.....	10.00	
121, Dissection, per part \$10; Osteology..	2.00	
Breakage deposit.....		\$2.50
126.....	8.00	
Clinical Medicine—101-2-3-4-5, each.....	15.00	
Pathology and Med. Bacteriology—per lab. credit.....	2.50	
Breakage deposit.....		2.50
Pharmacology and Toxicology—102.....	4.00	1.00
105.....	8.00	2.00
Physiology—2: 3 each.....	2.00	1.00
104.....	10.00	5.00
105; 115, each.....	12.00	3.00
114.....	5.00	5.00
116.....	5.00	1.00

Other Charges

Extra fee for payment after registration days.....	\$1.00
Men's gymnasium locker fee, including laundry, semester.....	1.25
Women's gymnasium costume.....	5.00
Women's gymnasium locker fee, including laundry, semester.....	1.25
Military uniform (cost depends upon annual contract) estimated.....	20.00
Deposit with abstract of doctor's thesis.....	50.00
Binding baccalaureate or second degree thesis.....	.75
For Extension Division charges, see special bulletins.	

General Requirements

All charges must be paid at the beginning of each semester. Class cards will not be issued until this has been done.

Graduate students pay the same fees as undergraduate students in the College of Letters and Science, but honorary fellows and honorary scholars are exempt from the incidental fee.

Members of the teaching and research staff of the University, graduate fellows, graduate scholars, and members of the State Geological and Natural History Survey who are candidates for higher degrees, shall pay such fees as are prescribed for graduate students resident in Wisconsin. After any such candidate shall have paid to the University of Wisconsin in such fees a total sum equal to or greater than that usually paid in seven semesters of candidacy by graduate students resident in Wisconsin, he shall be exempt from payments of such fees in subsequent sessions of the University.

Graduate students who are not members of the university staff of instruction or research and who in any semester pursue studies

in amount less than half the normal amount may have their fees prorated in proportion to the amount of such study upon the following conditions:

(a) The recommendation of the Dean of the Graduate School to the Registrar that the case comes under the above rule and that he regards it as one of more than common merit;

(b) The prorated fee shall not be less in amount than the regular incidental fee for the semester.

An additional fee of one dollar per semester must be paid by students who pay their fees after the prescribed registration days. (See Calendar.)

Upon the recommendation of the Commandant of the Department of Military Science, the Secretary of the Regents is authorized to remit fees to the extent of \$10 per semester to company officers of the battalion having the rank of captain or above, and to award a prize of \$50 at the end of each year of service of the field officers, colonel, lieutenant colonel, and adjutant.

Partial Fees and Refunds

From students entering after one-half of a semester or term shall have elapsed, only one-half of the prescribed tuition and fees shall be collected.

The Bursar, upon the recommendation of the Registrar, is authorized to refund to students withdrawing from the University, the proportion of any semester's tuition and fees indicated by the following table:

From first class day	Deduct per cent	Refund per cent
Until 2 weeks	20	80
Between 2 and 4 weeks	40	60
" 4 and 6 weeks	60	40
" 6 and 8 weeks	80	20
No refund after eight weeks.		

Students entering after regular registration days and withdrawing within eight weeks from the first class day, upon recommendation made, will be allowed refunds according to the above table based on the time actually in residence.

Summer session refunds will be on the same proportional basis as refunds for the regular year.

The full amount of fees paid shall be returned to students who for some reason fail of admission to the University.

No claim for remission of fees will be considered unless such claim be presented during the fiscal year to which the claim is applicable.

Fellows, scholars, and student assistants are required to pay laboratory fees; instructors and assistants are exempt from such fees.

Regulations for Doctor's Thesis

Each candidate for the degree of Doctor of Philosophy must deposit in the University Library printed copies of his thesis or of an approved part thereof, as provided by the regulations of the Graduate School (see p. 390). The candidate may receive his diploma before the thesis is printed provided a typewritten copy of the thesis with an abstract thereof is deposited with the Librarian, and the sum of \$50 with the Bursar of the Regents. The money will be returned on presentation to the library of the required number of printed copies of the thesis or approved part thereof within one year.

Gymnasium Practice and Military Drill

Men in the Colleges of Letters and Science, Engineering, and Agriculture and the Four-year Course in Pharmacy, are required to take gymnastic exercises and military drill during the first two years of their course. Students required to drill must purchase uniforms through the Military Department. The cost in 1916 was \$20.35. A locker fee, including laundry, of \$1.25 per semester is charged.

Women are required to take gymnastic exercise during the first two years of their course. A uniform gymnasium costume is required and can be purchased in the fall at the gymnasium office for \$5. A locker fee, including laundry, of \$1.25 per semester is charged.

Room and Board

At the present time the only rooming facilities provided by the University are in Chadbourne and Barnard Halls, halls of residence for women, accommodating 266 students (for details see below) and in three cooperative houses accommodating 32 women students. Residents of the cooperative houses are chosen from applicants who have attended the University at least one semester. Applicants should correspond with the Dean of Women. All other students are dependent for rooms upon private rooming houses, the Y. M. C. A. building, and the various fraternity, sorority, and club houses.

The prices of single rooms outside the university buildings range from \$2.50 to \$5.50 a week. A few double rooms can be secured for \$1.50 a week, per student, but the more desirable ones rent at \$2.00 to \$3.50 per student.

Dining rooms are maintained in Chadbourne and Barnard Halls and the University maintains a public cafeteria in Lathrop Hall. The average price of board in private boarding houses ranges from \$4.50 to \$5.00 a week.

The Dean of Men issues a Rooming and Boarding House Directory for men, copies of which may be had on application. The Dean of Women issues a similar list for women students. See p. 81.

Chadbourne and Barnard Halls

The two university women's dormitories, Chadbourne and Barnard Halls, are equipped with electric light and electric elevators. Heat is furnished from the central university heating plant.

Each room is provided with rug, dresser, rocker, three-quarter cot, study table, study chair, bookshelves and window shades. Occupants other than summer session students are expected to provide towels, sheets, pillow cases, blankets, and counterpanes or couch covers for the school year.

The young women who occupy these buildings are under the immediate charge of the Mistresses of the halls, and are expected cheerfully to conform to the requirements necessary for a family of students. Self-government is maintained.

In accordance with the act of the legislature of July, 1913, preference in the assignment of rooms in these halls is given to residents of the state of Wisconsin; of students outside the state, the children of alumni are given preference over others. Applications will be filled in regular order in accordance with this provision.

In order to give preference to members of the lower classes, the following apportionment is made:

Until September 1, the number of seniors, juniors, and sophomores to whom rooms in the halls are assigned is limited. Before September 1, no assignments are made to students not residing in Wisconsin. Beginning with September 1, any places available shall be assigned in the following order:

- (a) To legal residents of Wisconsin in order of their application, without regard to the class to which they belong.
- (b) To daughters of Wisconsin alumni outside the state.
- (c) To others.

Seniors and juniors resident in the halls, if they conform to the regulations as to residence in the state given above, will receive preference over those who are nonresidents.

Applications will be received in excess of the number of accommodations, and vacancies during the year will be filled in regular order from this waiting list.

The price for the college year of a single room in either Chadbourne or Barnard Hall is \$100; of a room accommodating two, \$75 per person; of two rooms in suite accommodating two, \$100 per person. There are a few rooms in Barnard Hall that may be had for \$75 and one suite in Chadbourne Hall accommodating three at \$100 for each person.

All residents of Chadbourne and Barnard Halls must take their meals in the hall in which they reside. In addition there are accommodations in the dining rooms for a number of other women students. The cost of board at present is \$171 for the school year of 36 weeks,* payable in monthly installments in advance. The halls are closed and no charge is made for board during the Christmas recess. The halls are open during the spring recess but dining rooms are closed and no board is charged.

Applications for rooms should be made to the Bursar of the University after April 1, for the following college year, and must always be accompanied by a deposit of \$10.

The deposit will be credited on the rent of the room; but if the room is not taken it will be forfeited unless notification is received by the Mistress prior to September 1. Applicants must accept the rooms assigned to them either in writing or in person before the opening day of the school year or they will forfeit the room. The balance due for rent must be paid to the Bursar not later than 10 days after the issuance of bills at the beginning of each semester.

All applicants are supposed to retain their rooms for the entire year. If it is necessary for a student to withdraw at the end of the first semester, the deposit fee will be refunded provided the room has been filled by the Mistress of the Hall from the waiting list.

If for any reason one of the occupants of a suite shall be obliged to give up her place in the suite, the remaining person may be required to take a single room if one is vacant, or to pay the price of the full suite during the time it is occupied by her alone.

Rooms are ready for occupancy not earlier than the Saturday before the first registration day.

*This includes the time from the beginning of classes in September to the last day of examinations in June, exclusive of the Christmas and spring recesses.

Average School Year Expenses

In 1914 answers to a questionnaire of the Board of Visitors indicated average student expenses to be about \$450 for the school year. This excluded tuition and university charges, but included travel, clothes, books, stationery, room rent, board, society charges and miscellaneous expenses. The average expense would now be somewhat higher—between \$450 and \$500.

The school year budget of an average student might include a combination of the following items:

Incidental Fee, year.....	\$24.00 to \$24.00
Locker Fee, freshmen and sophomores.....	2.50 " 2.50
Military Uniform, freshmen and sophomores.....	20.00 " 25.00
Books and Stationery.....	25.00 " 50.00
Room Rent.....	75.00 " 160.00
Board.....	160.00 " 200.00
Laundry.....	20.00 " 35.00
Incidental Expenses.....	50.00 " 150.00
*Nonresident Tuition.....	124.00 " 124.00
Laboratory charges depending on courses.	

These figures are an estimate of the cost to the *average* student; many students spend more or less. The Student Employment Bureau advises students earning their own way to come with at least \$200 capital. (See also Self-Support, below.)

Summer Session budget items (6 weeks basis):

†Incidental Fee.....	\$15.00 to \$15.00
Room Rent.....	10.00 " 25.00
Board.....	27.00 " 35.00
Books and Stationery.....	5.00 " 10.00
Incidental Expenses.....	10.00 " 30.00
Laboratory Charges (depending on courses).....	" 15.00

SELF-SUPPORT

Students who desire to attend the University on a partially self-supporting basis will find this possible. The University maintains a Student Employment Bureau under the direction of the Alumni Association at the Alumni Headquarters, 821 State Street, Madison. Students who find it necessary to earn part of their expenses while at the University should communicate with the Bureau as soon as possible. Application blanks and detailed information about student employment in Madison will be sent upon request. The

* Provisions for remission of nonresident tuition in certain cases are given under "Wisconsin Legislative Scholarships," p. 74.

† Summer session fees are not remitted, either to residents or nonresidents.

Bureau is principally called upon to furnish stenographers, typists, clerks, waiters, dishwashers, janitors, and choremen. Owing to the keen competition for places, the Bureau cannot promise positions to students in advance; but applications will be received at any time.

Women students who wish to secure work such as waiting on table, the care of children, light housework, sewing, mending, etc., are requested to communicate with the Mistress of Chadbourne Hall, Madison; those who desire positions as stenographers, typists, or clerks should register with the Student Employment Bureau.

There are also a number of undergraduate scholarships and loan funds (see below). While every possible assistance is rendered self-supporting students they are advised not to enter the University without some available funds. It is also recommended that they plan to take more than the regularly specified time for the completion of a course.

UNDERGRADUATE SCHOLARSHIPS AND LOAN FUNDS

Wisconsin Legislative Scholarships

Section 388 of the Wisconsin Statutes provides that:

"Any student who shall have been a resident of the state for one year next preceding his first admission to the University, shall be entitled to exemption from the fees for tuition in the University. Any student who shall not have been a resident of the state for one year next preceding his first admission to the University shall not be exempt from the payment of the tuition fees.

"The Regents of the University may remit either in whole or in part tuition, but not incidental fees, to not to exceed five per cent of nonresident students upon the basis of merit to be shown by suitable tests, examinations or scholastic records and continued high standard of scholastic attainment."*

Amelia E. H. Doyon Scholarships

The will of Mrs. Amelia E. H. Doyon, late of Madison, provided for a gift to the University of \$5,000 to be known as the Amelia E. H. Doyon Student Aid Fund. The income from this fund is divided into two equal parts, designated as the Amelia E. H. Doyon Scholarships, which are to be given to young women in attendance at the University, to be selected by the Faculty. In making this selection the scholarship or standing of the persons selected and their need of financial help are both taken into consideration. Neither scholarship is to be bestowed on any young woman who has not been in attendance as a student at the University of Wisconsin for at least one year. *

* For information address Chairman, Committee on Loans and Scholarships, The University of Wisconsin, Madison, Wisconsin.

Fannie P. Lewis Scholarship Fund

By the will of the late Fannie P. Lewis, of Watertown, Wisconsin, \$10,000 was left to be held in trust by the University Regents. The annual income from this money is to be divided equally between two women students of the University who shall be selected by the Regents, on the recommendation of the Faculty. In making these recommendations both scholarship and need of financial assistance are to be considered.*

Christian R. Stein Student Aid Fund

By the will of the late Christian R. Stein, of Madison, a bequest of \$1,000 was made to the University, the interest of which maintains a scholarship to be given by the Faculty to a student of the University who has been in attendance at least one year.*

Mortar Board Scholarship

Mortar Board, a society composed of senior women, maintains an annual scholarship of \$100 which is awarded to a woman student, the award being made on the basis of scholarship and need of financial assistance.*

Gamma Phi Beta Scholarship

The Gamma Phi Beta sorority, in 1911, established an annual scholarship of \$100 for women students, to be awarded on the basis of scholarship and need of financial assistance.*

Self Government Association Scholarship

The Self Government Association, in 1915, established a scholarship of \$100 for women students, the award to be based on scholarship and need of financial assistance.*

Kappa Kappa Gamma Scholarship

An annual scholarship of \$150 is provided by the Kappa Kappa Gamma sorority for the assistance of needy* and meritorious women students.*

* For information address Chairman, Committee on Loans and Scholarships, The University of Wisconsin, Madison, Wisconsin.

A. J. Horlick Scholarship

Since 1915 Regent A. J. Horlick has given a scholarship of \$225 which is continued for the current year. This is awarded in the College of Agriculture for special research on some phase of inheritance of disease resistance in plants.**

Woodbury Scholarship

The Newport Mining Company since 1914-15 has given an annual scholarship of \$250 available in the Mining Engineering Course of the College of Engineering.

For graduate fellowships and scholarships, see pp. 380-384.

Loan Funds and Student Aids**John A. Johnson Student Aid Fund**

The University is indebted to the liberality of Hon. John A. Johnson, late of Madison, for a gift of \$5,000 made in 1876, the interest of which is lent to students. The principal of this fund now amounts to about \$14,000. The sum obtained by one student in one year shall not exceed \$50, and the total amount shall not exceed \$200.*

Alexander H. Rogers Loan Fund

Through the generosity of the sons of the late Alexander H. Rogers, of Chicago, the sum of \$1,000 from the estate of Mr. Rogers has been turned over to the University to be used as a loan fund for the assistance of needy students. By the terms of the gift no one student may secure more than \$250 from this fund.*

Graduating Class Loan Fund

The class of 1900 gave to the University several hundred dollars, the profit of the Senior Class Play, as the nucleus of a loan fund for the aid of needy students, to which several succeeding classes have made substantial additions.*

** For information address College of Agriculture, The University of Wisconsin, Madison, Wisconsin.

* For information address Chairman, Committee on Loans and Scholarships, The University of Wisconsin, Madison, Wisconsin.

Secretary's Loan Fund

The Secretary of the Regents in 1900 established a fund of \$500 for the aid of meritorious students. Additions to the fund have been made by others. No loans shall exceed \$50 in a single year, and the aggregate loans to any person shall not exceed \$200.***

Emery Loan Fund

In 1900 a fund was started by Miss Annie Crosby Emery, formerly Dean of Women, which is lent to needy women students on recommendation of the Committee on Loans.*

College of Engineering Loan Fund

The College of Engineering Loan Fund was started in 1901 by members of the faculty of the College of Engineering. It has been added to at various times until it now amounts to about \$800. It is used for the assistance of needy students in the College of Engineering.†

Self Government Association Loan Fund

The Self Government Association has established a loan fund for the assistance of women students in need of financial assistance. This fund now amounts to about \$600.*

Chicago Association of Wisconsin Alumnae Loan Fund

In 1913 the Chicago Association of Wisconsin Alumnae donated a fund for loans to needy women students. Preference is given to juniors and seniors and no student may secure more than \$50 from the fund.*

Agricultural College Loan Fund

In 1911 Albert B. Kuppenheimer, of Chicago, gave \$750 to establish a loan fund in the College of Agriculture. In 1916 the outstanding balance of the Geneva Loan Fund was consolidated with the Kuppenheimer fund, making a total of \$1500. This is loaned to needy students in small amounts with interest at 6%, after maturity.**

* For information address Chairman, Committee on Loans and Scholarships, The University of Wisconsin, Madison, Wisconsin.

** For information address Professor D. H. Otis, Assistant Dean, College of Agriculture, Madison, Wisconsin.

† For information address Dean, College of Engineering, The University of Wisconsin, Madison, Wisconsin.

*** For information address Secretary, Board of Regents, The University of Wisconsin, Madison, Wisconsin.

Class of 1914 Loan Fund

The Class of 1914 established a loan fund, each senior paying \$2 a year for five years. The fund now amounts to \$740.**

Class of 1885 Loan Fund

In March, 1916, the class of 1885 established a loan fund, the initial remittance amounting to \$58; the money to be loaned to needy students.**

University League Loan Fund

In March, 1916, the League of University Women established a loan fund, the initial remittance amounting to \$50; the money to be loaned to needy students.**

Class of 1916 Memorial Loan Fund

The class of 1916 established a loan fund now amounting to \$670. Principal and interest are to be loaned to students for periods of not to exceed one year; not more than \$50 to one person. 3% interest is to be charged, with 6% after maturity. No distinction is made between colleges or classes.**

Kuppenheimer Loan Fund

Mr. Albert B. Kuppenheimer, of Chicago, donated \$1,000 in December, 1916, to establish a loan fund open to all students under the following conditions:

1. Loans not to exceed one year;
2. Joint signatures of responsible parties required;
3. Interest, only after maturity, 6%;
4. Administration to be in the hands of the general university loan committee.**

HONORS

Honors at graduation will be voted by the Faculty to those students whose graduation theses show exceptional excellence, and who have completed with unusual success a long course of study in the department in which the thesis is presented. The thesis must show work equal to two hours a week for one year in addition

** For information address, Chairman, Committee on Loans and Scholarships, The University of Wisconsin, Madison, Wisconsin.

to all other requirements for graduation. In granting special honors, the Faculty acts upon the recommendations of the instructor under whose direction the thesis is written, approved by a committee of the Faculty. For medals awarded for exceptional theses, see page 86. Students desiring to become candidates for special honors in any department must make application to the Faculty, at the opening of the second semester, through the professor in whose department the honors are sought. For honors in the College of Letters and Science, see page 124.

PRIZES

Lewis Prize

James T. Lewis, of Columbus, formerly governor of the state, gave \$100 in 1865 and another \$100 in 1866 to constitute a fund the income of which was to purchase an annual scholarship medal. In 1873 it was decided, with the consent of the donor, that the income should be used as a prize for the best undergraduate essay. In 1905, the fund having grown to over \$300, the Regents in recognition of this having been the first permanent endowment given to the University established the "Lewis Prize" consisting of \$25 annually, any deficiency in the income of the fund to be paid from the general account of the University. The prize is awarded to the undergraduate student who shall produce, during the collegiate year, pursuant to regulations prescribed by the President and Faculty, the best written essay. The fund now amounts to about \$600.

Bryan Prize Fund

In 1899 William Jennings Bryan presented \$250 to the University, the income to be used as a prize for the best essay on *The Science of Government*. The fund now amounts to \$400 and is accumulating until such time as the income shall reach \$25.

William F. Vilas Medal and Prize Fund

In each of the fiscal years 1910-11 and 1911-12, Anna M. Vilas gave \$125 for medals for intercollegiate debating and oratory. In June, 1912, in order to make this annual gift permanent, she turned

over \$4,000 to the Central Wisconsin Trust Company of Madison, the annual income to be used as follows:

First: \$125 for seven medals in oratory, to be known as the William F. Vilas Medals for Oratory. The Department of Public Speaking has charge of the administration of these prizes.

Second: Two cash prizes for essays—one of \$50 and one of \$25, to be known as the William F. Vilas Prizes for Essays. The English Department posts annually the conditions of competition on various bulletin boards.

In 1915-16 the medals were awarded to Guy Black, Forrest R. Black, Herman A. Zischke, Milo K. Swanton, Harold E. Kinne, Wm. S. MacFadden, Robert L. Peters and Isadore W. Mendelsohn.

The prizes for essays were awarded: 1st prize to Charles A. Gill, *The Poetry of Robert W. Service*; 2nd prize to Hymen Rosenblatt, *The Plays of Israel Zangwill*.

Prize of the Wisconsin Menorah Society

In December, 1911, Julius Rosenwald offered the University \$100 annually for a prize, to be known as the prize of the Wisconsin Menorah Society, and to be awarded for an original undergraduate essay on a topic relating to the literature, history, or achievements of the Jewish people.

The award of this prize is in the hands of a faculty committee, who judge not merely on substance but also on literary form. If no competing essay is deemed worthy of the prize, no award is made. Essays are limited to ten thousand words. They are to be submitted in typewritten form, according to the rules for theses. The title-page is to bear an assumed name, the real name of the writer being enclosed in a sealed envelope marked on the outside with the assumed name and handed in with the essay. All essays must be placed in the hands of the committee on or before May 1.

In 1915-16 the prize was awarded to Max Roseman for an essay on *The Hebraic Renaissance in Palestine*.

Halle Steensland Prizes

The Halle Steensland prizes were offered for the year 1915-16 only and were won: first prize, by Roy J. Herrick with an essay on *The Habit of Exactness as Mental Discipline*; second prize, by Marshall W. Sergeant, *The Permanent Values of College Life*.

GRADE POINT SYSTEM

The grade point system went into effect September, 1915, with the class of 1919 on the following basis: as many points are required for graduation as credits. For grade *excellent*, three points are awarded for each hour of credit; for grade *good*, two points; for grade *fair*, one point; for grades of *poor*, no points.

The maximum number of points that can be secured by a student graduating in a course which requires, for example, 120 hours is 360; the minimum, 120. It is evident that an average grade of fair is necessary for graduation. Students who, by reason of grades of *poor*, fall behind in the required number of points, are ineligible for graduation. By use of points students may readily determine the quality of progress they are making in their course.

SUPERVISION OF STUDENT LIFE

A booklet of "Regulations for the Guidance of Undergraduate Students" is published and distributed annually, containing specific instructions concerning registration, fees, advisers, election of studies requirements, the grading system, the regulations concerning social life, public exhibitions, eligibility for student activities, admission into fraternities, and information concerning student self-government. The Faculty Committee on Student Life and Interests publishes a directory of lodging and rooming houses for men students, with detailed information. The Y. M. C. A. publishes a booklet of useful local information on many matters of interest to students. Any of these books will be sent upon request.

The Faculty Committee on Student Life and Interests has general supervision over all organized student activities, and its chairman, the Dean of Men, is available for correspondence and consultation regarding student affairs at all times. He will also gladly confer with parents or guardians regarding individual students (men).

The academic and social welfare of women students is under direct supervision of the Dean of Women. For the benefit of those women who are not accommodated in Chadbourne and Barnard Halls (see pp. 71-2), she has prepared a directory of rooming and boarding houses. All houses listed have been inspected by her, and though responsibility for them cannot be assumed by the Uni-

versity, they are believed to be suitable homes for women students. A copy will be sent on application.

Women students are expected to occupy rooms only in such lodging houses as accommodate women exclusively, and in which a parlor is provided for the reception of visitors. Exceptions are made only by permission of the Dean of Women. The houses on the prepared list meet these requirements. All arrangements must be made directly with the persons mentioned in the list, and should be made early by those who desire a wide choice of rooms. All women students are required to report to the Dean of Women to register their addresses, and to be directed, if rooms have not been secured. All changes of address should be reported promptly.

Lathrop Hall, a commodious building for the use of the women of the University, provides, in addition to a finely equipped gymnasium, restaurant and rest room, a meeting place for student organizations, and a center for the social life of the University.

Mrs. Lois Kimball Mathews, the Dean of Women, and her staff of assistants invite correspondence with parents and guardians, and gladly cooperate with them regarding the welfare of students.

The legislative organs of student self-government are the men's Student Senate, and the women's Self-Government Association; the judicial bodies are the Student Court, and the Women's Judiciary Committee.

By charter, the Student Senate, which consists of 15 elected members, is the general representative and legislative body of the male students. It has general supervision over all men's activities. By joint committee the Senate and the women's Self Government Association have charge of all matters in which the interests of both men and women are involved, except insofar as these matters affect scholastic interests or intercollegiate relations; these latter interests are under the control of the Committee on Student Life and Interests.

Every woman student in the University is *ipso facto* a member of the Self Government Association. The object of the association is in its own words: "to regulate all matters pertaining to the student life of its members which do not fall under the jurisdiction of the Faculty; to further in every way the spirit of unity among the women of the University; to increase their sense of responsibility toward each other, and to be a medium by which the social standards of the University can be made and kept high." Each hall of residence, each sorority house, each lodging house where more than ten girls reside, and each section of Madison where girls are

living at home, has a representative on the board of this organization. The association each year provides entertainment of various sorts for university women, adds a small sum to the loan fund for girls, and undertakes, under direction of an assistant in the office of the Dean of Women, a vocational conference for the purpose of presenting to the women students occupations other than teaching. A bulletin of information for women is published by the association.

The Student Court, the outgrowth of a pledge to abolish hazing given in October, 1909, by the former Student Conference and the student body, operates under a charter granted by the university Faculty and approved by the Board of Regents. The chief duties and powers of the Court as stated in the charter are: "to maintain good order throughout the male student body, and to enforce university regulations within its jurisdiction. The Student Court shall have original and exclusive jurisdiction in all cases of discipline of male undergraduates, except cases arising in the summer session, except cases involving dishonesty in university work, and except such flagrant cases of action or behavior so contrary to the welfare of the University as to require immediate consideration." An appeal from the decision of the court may be made to the Faculty Committee on Appeals, and a further appeal may be made to the university Faculty.

The Women's Judiciary Committee is a committee of the Self Government Association whose powers and duties are identical with those of the Student Court, where women students are concerned.

Student Advisers

Upon entering the College of Letters and Science, the College of Engineering, and the College of Agriculture, each student is assigned to a member of the Faculty who acts as his adviser. Each semester the student is required to consult his adviser concerning the choice of studies, and the adviser must give his approval before the student is permitted to enter classes. It is the duty of the adviser to guide the students under his care in all matters concerning their university courses; to see that all rules relating to required or elective studies, promotion, and graduation are strictly complied with; and, in general, to aid students in obtaining the greatest individual profit from their university courses.

The systems of the different colleges vary in some respects. There are no student advisers in the Law School.

Student Health

The Department of Clinical Medicine has general supervision of the health of the students. It aims to determine the medical fitness of each student entering the University, to study the intricate problems of the relation of health to higher education, and to prevent disease among the students by attempting to correct proved errors in present educational practices and in the life of the individual.

Medical Examinations.—Students entering the University for the first time are required to undergo a careful medical examination in order to determine their fitness to carry on university work. An appointment for medical examination is made at the time of registration. This appointment must be met promptly. Records of the results of these examinations are kept in the office of the Department of Clinical Medicine for future reference in the supervision of the mental and physical development of the student. Recommendations are made to the deans relative to the general health, and in the case of those required to take physical education, to the Department of Physical Education relative to the physical condition of the student.

In addition to this routine medical examination, which includes an examination of the heart, lungs, and other vital organs, together with tests for vision and hearing, those entering the freshman and sophomore classes are given physical efficiency tests by the Department of Physical Education.

The Medical Adviser's Office* is established for the general supervision of students needing medical attention. It is earnestly desired that all cases of student illness be promptly reported to this office whether professional service is desired or not. At the same time students should feel free to seek advice concerning the care of their health. A careful examination is made of the physical condition and the functional activity of those who consult the members of the staff, and where it seems advisable, the family physician is notified for future advice and consultation.

Conditions affecting the general welfare of the university community are treated by the members of the staff, but students requiring special care—major surgery, treatment of the eye, ear, etc., are referred to specialists.

*762 Langdon Street, Telephone, University 306.

Students suffering with smallpox, diphtheria, and scarlet fever, are cared for at the City Contagious Hospital. An infirmary for the care of acute diseases is maintained by the University at 752 Langdon Street.

SOCIETIES AND PUBLICATIONS

Literary and Scientific Societies

The literary and debating societies of the University have played so important a part that they may almost be said to constitute a department by themselves. The Athenian and Hesperian societies are nearly as old as the University itself, Athena having been organized in 1850, and Hesperia in 1854. Philomathia was organized in 1886, and Olympia in 1902. The societies are sustained with great enthusiasm, and are an important means of intellectual training. Athena, Hesperia, and Philomathia form what is known as the Joint Debate League, which arranges annually a public debate between two of these three societies. This joint debate has been a feature of the University for nearly forty years. The four above-mentioned are men's societies in the College of Letters and Science. The debating society of the College of Agriculture is the Agricultural Literary Society.

The young women maintain two literary societies, Castalia, established in the early years of the University, and Pythia, organized in 1902. The University is a member of the Midwest Debating League composed of the universities of Michigan, Illinois, and Wisconsin. Each university meets the others in debate annually. A series of preliminary oratorical contests, held the middle of each year, is made up of a sophomore contest, a junior contest, a junior-ex contest, (between representatives of the junior class of each literary society), and a senior contest. The winner in this series represents Wisconsin in the Northern Oratorical Contest, where he meets representatives from the universities of Chicago, Iowa, Michigan, Minnesota, Northwestern, and Oberlin.

Research, Professional and Honorary Societies

The Science Club, the Historical and Political Science Association, and the Language and Literature Club, including both faculty members and advance students, have been organized to promote scientific study and research in their respective fields. Each organi-

zation awards a bronze medal annually for the best baccalaureate thesis in its field.

Journal clubs or societies for the furthering of the special work of the departments exist in various departments of the University. Among these are the *Germanistische Gesellschaft*; *Das Deutsches Haus*; *Nora Samlag*, a Scandinavian society; the Romance Language Club; the Pharmaceutical Society; the Classical Club; the Physics Journal Club; the Biological Club; and the Chemical Club. In other departments, where no such organization has been effected, like results are reached by means of the various seminaries. In the technical colleges similar societies are maintained: the Civil Engineering Society, the Electrical Engineering Society, the American Society of Mechanical Engineers, the U. W. Mining Club, the U. W. Engineers' Club, the U. W. Chemical Engineering Society, the Commercial Club, the Country Life Club, the Euthenics Club, and the Live Stock Club. The graduate students of the University maintain a Graduate Club.

The honorary fraternities are: Phi Beta Kappa, established in 1898; Tau Beta Pi, honorary engineering fraternity, established in 1899; Alpha Zeta, agriculture, 1906; Phi Lambda Upsilon, chemistry, 1906; Sigma Xi, science, 1907; Eta Kappa Nu, electrical engineering, 1910; Sigma Delta Chi, men's journalism, 1911; Theta Sigma Phi, women's journalism, 1910; Beta Gamma Sigma, commerce; Delta Sigma Rho, intercollegiate oratory and debate; Sigma Sigma, medicine; Artus, economics; Pi Tau Sigma, mechanical engineering; Omricon Nu, home economics; Beta Sigma Alpha, agricultural; and Scabbard and Blade, military science.

Musical and Dramatic Organizations

The university musical organizations are: the Choral Union, the University Regimental Band, the University Orchestra, the men's Glee Club and Mandolin Club, and the Girls' Glee Club.

The Haresfoot Club, maintained by university dramatic talent, presents a musical comedy annually; the Red Domino Club and the Twelfth Night Club are similar organizations maintained by women students. The Edwin Booth Club aims to promote dramatic interest and train dramatic talent.

Social and Religious Organizations

The social life of the undergraduate finds expression in more than 100 fraternities, societies, clubs and class organizations. The Wis-

consin Union, one of the most important of the men's organizations, consists of every male student in the University. No dues or fees are charged. The Union is active in promoting the social welfare of the student body, and has charge of the annual Union Vodvil, the quadrennial University Exposition, and numerous smaller social gatherings.

The most important religious organizations of the University are the Young Men's Christian Association, and the Young Women's Christian Association. The Y. W. C. A. maintains one secretary, and the Y. M. C. A., four, who devote their entire time to religious, social, and philanthropic work among the students. Seven student pastors supported by as many religious denominations, each with its own student organization, cooperate with the secretaries and promote Christian work in the student body in a very systematic way.

Publications of the University

The Bulletin of The University of Wisconsin is published bi-monthly at Madison. The Economics and Political Science series, the History series, the Philology and Literature series, the Science series, the Engineering series, and the University Extension series contain original papers by persons connected with the University. A check list showing the issues to date in the above-named series, and giving more detailed information regarding other publications may be obtained on application to the Librarian.

The General series of the Bulletin includes the annual catalogue, special announcements of the various schools and colleges, etc. A directory of officers and students is issued early in each academic year, and a general catalogue of officers and graduates is published once in five years, the last having been issued in 1912. Apply to the Registrar for copies of these publications.

The High School series comprises a number of manuals designed to assist secondary school teachers in the subjects of the high school curriculum. Refer to the Secretary, Committee on Accredited Schools and Appointments.

From the Washburn Observatory are issued the Publications of Washburn Observatory; from the Agricultural Experiment Station, bulletins and annual reports; and from the office of the Farmers' Institute, the Wisconsin Farmers' Institute Bulletin.

Student and Alumni Publications

Student publications include: The Daily Cardinal; The Wisconsin Literary Magazine, published monthly; The Wisconsin Engineer, published monthly; The Wisconsin Country Magazine, published monthly; The Awk, a humorous monthly; and The Badger, the junior class annual. The Wisconsin Alumni Magazine, a monthly journal, is the official organ of the alumni.

ADMISSION

Undergraduate students are admitted:

1. Upon examination at the University. (See p. 102.)
2. Upon certificate. (See pp. 102-104.)
3. Upon evidence of their standing in other institutions of higher learning. (See pp. 104-108.)
4. As adult special students. (See p. 109.)

Time of Entrance

Students may matriculate at the opening of either semester. It is also possible for them to enter at the beginning of the summer session; and there are advantages in beginning work at that time. The student becomes acquainted with university methods of instruction in advance, and his experience and the advice of his instructors will help him in planning his work for the regular session. For courses offered, see pp. 451-467.

Entrants are advised to present themselves several days in advance, in order to make all necessary arrangements. An additional fee is required for late registration. (See p. 69.)

ENTRANCE REQUIREMENTS

Entrance requirements are stated in terms of units. A *unit* equals five recitations a week for one year of at least 36 weeks in one branch of study. Two laboratory periods in any science or vocational study are considered as equivalent to one class exercise. In closely allied branches not usually taught in periods of one year each, such as physiology and zoology, units may be constructed by adding the respective time values of such studies. Three recitations a week for a year and a half may be counted as one unit.

Fourteen units, four prescribed and ten elective, are required for admission. Not more than four will be accepted in any one subject. Entrants offering only one foreign language must have at least two units. They must have at least three units of one foreign language before a single unit of another language may be credited.

I. The following four units are required of all:

English.....	2 units
Mathematics:	
Algebra.....	1 unit
Geometry.....	1 unit

II. Two units must be presented from one of the following:

One Foreign Language.....	2 units
(French, German, Greek, Hebrew, Latin, Norse or Spanish.)	
or Science.....	2 units
or History.....	2 units

III. In addition to the six units required under I and II, eight units must be offered from the following elective subjects:

English.....	1 or 2 units
Mathematics.....	$\frac{1}{2}$, 1, 1 $\frac{1}{2}$ or 2 units
Greek.....	1 or 2 units
Latin.....	1, 2, 3 or 4 units
French.....	1, 2, 3 or 4 units
German.....	1, 2, 3 or 4 units
Norse.....	1 or 2 units
Spanish.....	1 or 2 units
History: (Not more than four units in all)	
Ancient History.....	1 unit
Medieval and Modern History.....	1 unit
Medieval and English History.....	1 unit
English History.....	1 unit
United States History.....	1 unit
Civics.....	$\frac{1}{2}$ or 1 unit
Economics.....	$\frac{1}{2}$ unit
Science: (Not more than four units in all)	
Botany.....	1 or 2 units
Chemistry.....	1 or 2 units
Physical Geography and Geology.....	1 or 2 units
Physics.....	1 or 2 units
Physiology.....	$\frac{1}{2}$ unit
Zoology.....	$\frac{1}{2}$, 1 or 2 units

Vocational Subjects:

Not more than four units in all. These may be included in any one group, or made up from a combination acceptable to the University. All vocational work must have been inspected and approved by the University before being accepted for admission. (See p. 101.)

Agriculture.....	1, 2, 3 or 4 units
Commercial Work.....	$\frac{1}{2}$, 1, 2, 3 or 4 units
(Including Commercial Law $\frac{1}{2}$ unit; Commercial Geography $\frac{1}{2}$ unit.)	
Domestic Science.....	1, 2, 3 or 4 units
Manual Arts.....	1, 2, 3 or 4 units

Optional Subject..... 1 unit

An optional subject is a high school subject not specified in the list of electives. One optional subject of one unit, or two of one-half unit each, may be offered; but none may be offered with four units of vocational subjects.

For the scope of work expected in each subject see pp. 94-102.

Advised Grouping of Preparatory Subjects

Students are advised to adapt their preparatory work to the course they expect to pursue in the University. Attention is called to the admission requirements of the several colleges and courses, and to the statements of the several departments covering the preparation best adapted to the work of each. Students expecting to go to the University, who are uncertain as to the college in which they will take their work, are advised to distribute 12 of the 16 units of the high school course as follows:

English, at least.....	2 units
Mathematics, at least.....	2 units
Science, at least.....	2 units
Foreign Language.....	2, 3 or 4 units
History, at least.....	2 units

If less than four units are offered in Foreign Language, it is advised that the replacement be by units of English, History, Science, or Mathematics.

Entrance Requirements of the Several Colleges, Schools and Courses

COLLEGE OF LETTERS AND SCIENCE.

Four units under I, two units under II, and eight units under III, will admit to the following:*

1. *Bachelor of Arts courses* (General Course, Course in Commerce, and Course in Journalism). Foreign language requirements for the degree are stated on p. 115.
2. *Bachelor of Science courses* (Course in Chemistry, Medical Science Course, and Four-year Course in Pharmacy). Foreign language graduation requirements are stated on pp. 228, 365 and 244-245, respectively.

Medical Science Course—Students are advised to present Latin and a second foreign language (Greek, French or German) to the amount of at least six units.

Four-year Course in Pharmacy—Two units of foreign language should be offered for entrance or be made up in college without credit.

3. *Course leading to the degree of Ph. B. (General Course)*. No foreign language required. For substitutions for language, see p. 118.
4. *Course leading to the degree of Ph. B. (Course for Normal School Graduates)*. Requires graduation from a state normal school. (See further p. 120ff.)

* Since foreign language requirements for the several degrees may be satisfied in part by preparatory foreign language, references are made to the complete statements of those requirements. See also p. 93.

5. *Course leading to the degree of Bachelor of Music.* Same as B. A. courses, above, A, 1. (See p. 416-417.)

6. *Two-year Course for Supervisor of Music Certificate.* No foreign language required. (See p. 419.)

See also Library School and Two-year Course in Pharmacy below.

COLLEGE OF AGRICULTURE.

Four units under I, two units under II, and eight units under III, will admit to the following:

1. *Bachelor of Science courses* (Long Course and Course in Home Economics.) Foreign language requirements are stated on pp. 317-318 and 347 respectively.

2. *Graduate in Agriculture* (Middle Course). No foreign language required.

COLLEGE OF ENGINEERING

English.....	2 units
Algebra.....	1½ units
Geometry, Plane 1 year, Solid ½ year.....	1½ units
German or French.....	2 units

and additional units to total 14 from III, excluding Domestic Science. Foreign language graduation requirements are stated on p. 276.

Students deficient in advanced algebra or solid geometry, who meet the entrance requirements for the College of Letters and Science, will be admitted to the College of Engineering but must make up the deficiency during the first semester, special classes being provided.

LAW SCHOOL. (1) Candidates for a degree: Credits equivalent to the first two years of the College of Letters and Science. (2) Not candidates for a degree: Four units under I, two units under II, and eight units under III, provided entrants are at least 21 years of age. (See also pp. 355.)

LIBRARY SCHOOL. See pp. 246-247.

MEDICAL SCHOOL. (1) Satisfaction of Letters and Science entrance requirements. (2) Equivalent of two years' work in that college, which should include successful completion of: (a) laboratory courses of college grade in physics, chemistry and biology; and (b) courses in German, French or Latin. Elementary Latin and a reading knowledge of French or German are required. (See also pp. 364.)

Two-year Course in Pharmacy. (1) High school graduates are admitted without examination and without practical experience in a drug store. (2) Non-graduates are admitted: (a) if they are eighteen years of age; and (b) if they present satisfactory certificates of at least two years' attendance from some standard high school, or its equivalent from a similar institution.

The time between the secondary education and the college course should have been spent in a drug store where physicians' prescriptions are regularly compounded.

Preparatory Foreign Language Outline

A. A preparatory course including *no foreign language* is sufficient for entrance and for graduation without foreign language requirements in the following courses of the several colleges:

1. College of Letters and Science:
 - a. Course leading to the degree of Ph. B. (General Course);
 - b. Two-year Course in Pharmacy.
2. College of Agriculture, Two-year, Middle Course.

It is sufficient for entrance in:

3. College of Letters and Science:
 - a. All courses leading to the degree of B. A., subject to a graduation requirement of 32 credits in two or more foreign languages. (See further, p. 115.)
 - b. All courses leading to the degree of B. S., subject to a graduation requirement of 24 credits in foreign languages. (For particular requirements, see: Course in Chemistry, p. 228; Medical Science Course, p. 365; and Course in Pharmacy, p. 244-245.)
4. College of Agriculture, Long Course, and College of Engineering, subject to a graduation requirement of 16 credits in French or German. (See further, pp. 317-318 and 276 respectively.)

Note: College of Engineering—8 of the 16 credits do not count toward graduation.

B. A course including *two units in one foreign language* admits as above (A), and is sufficient for entrance in:

1. College of Letters and Science:
 - a. All B. A. courses, subject to a graduation requirement of 24 credits in foreign languages as specified on p. 115.
 - b. All B. S. courses, subject to a graduation requirement of additional credits in foreign languages depending upon the entrance language. (See reference cited above, A, 3, b.)
2. College of Agriculture, Long Course, and College of Engineering, subject to a graduation requirement of 8 credits in French or German (provided the entrance language be either French or German for the College of Engineering). (See pp. 317-318 and 276 respectively.)

C. A course including *three units in one foreign language* admits as above (B), and is sufficient for entrance and for graduation without further foreign language requirements in:

1. College of Agriculture;
2. College of Engineering.

It is sufficient for entrance in:

3. College of Letters and Science;
 - a. All B. A. courses, subject to a graduation requirement of 20 credits in foreign languages as specified on p. 115.
 - b. All B. S. courses, subject to additional foreign language graduation credits. (See references under A, 3, b.)

D. A course including *four or more units of foreign language* admits as above (C), and is sufficient for entrance in:

1. College of Letters and Science;
 - a. All B. A. courses, subject to a graduation requirement of additional foreign language as specified on p. 115.
 - b. All B. S. courses, as above, C, 3, b.

Note: College of Agriculture—Four credits must be in not more than *two* foreign languages. (See p. 317-318.)

College of Engineering—Four credits may be in *two or more* foreign languages. (See p. 276.)

Scope of the Preparatory Work

The following description serves to indicate the extent of the preparation expected in each of the several subjects named in the preceding requirements for admission:

English

ENGLISH. 2, 3, or 4 units. All applicants for admission must present two units in English, one of which must consist of composition, and one of the reading and study of English classics. The two units required in English correspond in amount and character to the work of the first two years of the standard high school course, in which one-half of the time is devoted to theme-writing and instruction in the principles of composition, and one-half to the careful study of a number of English classics. It is recommended that applicants present at least three units in English, the third unit to consist of additional work in composition, and either (1) an outline history of English and American literature with the reading and

study of representative selections of each period, or (2) the intensive study of a few typical examples of the novel, the drama, the lyric, and the essay. Four units of English should include composition, and both (1) and (2) given above, in addition to the two required units.

Composition and Rhetoric. Systematic practice in theme-writing with instruction in the principles of composition and the forms of discourse must form an important part of each unit of English presented for entrance. Every student entering the University is examined as to his ability to express himself in clear, correct, idiomatic English. The test consists in requiring the student to write several essays on familiar subjects, in which he plans his work by paragraphs, and constructs both paragraphs and sentences in accordance with the simpler principles of composition. No student will be passed in this test and permitted to pursue the course in Freshman English whose work shows serious weakness in spelling, punctuation, grammar, sentence construction, or division into paragraphs. Facility of expression will not be sufficient to offset marked deficiency in spelling, punctuation, grammar, or sentence structure. A more detailed statement of the necessary qualifications for the Freshman English course is given in Bulletin No. 13 of the High School Series on *Requirements for Admission to the Freshman English Course (English 1)*. Students whose preparation in English composition is found to be deficient must make up such deficiency in one year under penalty of being dropped from the University. The University provides a course of instruction for such students. See English A, p. 142.

Reading and Study of English Classics. 2 units. The two units in English required of all applicants for admission must include the thorough study of at least ten of the English classics on the list of uniform college entrance requirements in English, or their equivalents. The aim of the study of these selections should primarily be the interpretation of the works as independent units; other considerations, such as form, biography, literary history, or critical comparisons, though they should not be neglected, should be kept subsidiary to this main object.

History of English and American Literature. 1 unit. In addition to the required units in English, applicants for admission may present one unit in the history of English literature, or in the history of English and American literature. In designating this unit as a study of English and American literature, it is intended that the greater part of the time should be devoted to the reading of selec-

tions from representative authors of each period; and that in the study of the history of literature, which should not occupy more than one-quarter of the time, emphasis should be placed on general movements and tendencies in literature as shown in the selections studied. In the history of English literature characteristic selections from most of the following authors should be read: Chaucer, Shakspeare, Bacon, Milton, Pope, Addison, Goldsmith, Gray, Burns, Scott, Wordsworth, Coleridge, Keats, Shelley, Tennyson, Browning, Lamb, George Eliot, Dickens, and Thackeray. In connection with the history of American literature the student should be familiar with representative works of Longfellow, Whittier, Bryant, Holmes, Irving, Hawthorne, Cooper, Poe, Lowell, and Emerson. A study of the principles of composition, and practice in theme-writing, must be included in this unit.

Advanced Study of Classics. 1 unit. Besides the two units of required work in the reading and study of English classics, students may offer one unit representing advanced work in the study of literature. This should consist of an intensive study of typical examples of the novel, the drama, the lyric, and the oration or the essay. At least one work from each of the following four groups should be included: I. (a) Thackeray's *Henry Esmond*; (b) Hawthorne's *The House of the Seven Gables*; (c) Dickens's *A Tale of Two Cities*; (d) George Eliot's *Silas Marner*; II. Shakspeare's (a) *Macbeth*, (b) *Hamlet*, (c) *King Lear*; III. Palgrave's *Golden Treasury* (First Series), (a) Books ii and iii, or (b) Book iv; (c) Milton's *Lycidas*, *L'Allegro* and *Il Penseroso*; IV. (a) Burke's *Speech on Conciliation*; (b) Webster's *First Bunker Hill Oration*, and Washington's *Farewell Address*; (c) Macaulay's *Life of Johnson*, *Essay on Milton*; (d) Carlyle's *Essay on Burns*. A study of the principles of rhetoric, with frequent and systematic theme-writing, must form a part of this unit.

Mathematics

ALGEBRA. 1 or 1½ units. One unit is required of all students and should include: Addition, subtraction, multiplication, division, equations of the first degree with one unknown number, simultaneous equations of the first degree, factors, highest common factor, lowest common multiple, quadratic equations, simultaneous equations above the first degree, elementary theory of indices and radicals.

An additional half year of algebra is strongly recommended for all students and is required of Engineering students. The work should cover: Simultaneous quadratic equations; ratio, proportion

and variation; graphical representation of simple relations between two variables; binomial theorem for positive integral exponents; logarithms, including use of tables in simple numerical work; arithmetical and geometrical progressions.

GEOMETRY. One unit is required of all students. 1 unit, *combination course of a single year in plane and solid geometry*: About 180 propositions, of which 45 must be in solid and spherical geometry.

1 unit, *plane geometry*. A unit credit will be given for a more extensive and intensive course of a year in plane geometry.

$\frac{1}{2}$ unit, *solid geometry*. A half year of solid geometry following a year of plane geometry will be accredited $\frac{1}{2}$ unit.

The College of Engineering requires for admission $1\frac{1}{2}$ units of plane and solid geometry.

TRIGONOMETRY. $\frac{1}{2}$ unit. The fundamental properties of the trigonometric functions, the addition theorem and the more important formulas which follow from it; the solution of the various cases of right and oblique plane triangles; the use of logarithmic and trigonometric tables.

Additional Credit. $\frac{1}{2}$ to 1 unit for work in algebra, trigonometry, surveying, or other mathematics: total credit not to exceed 4 units.

History, Civics, and Economics

HISTORY. 1, 2, 3, or 4 units. History may be offered in the following "blocks":

Ancient History, 1 unit.

Ancient and Medieval History, 1 unit.

European History to approximately the end of the 17th Century, 1 unit.

Medieval and Modern History, 1 unit.

Medieval and English History, 1 unit.

Modern European History, 1 unit.

English History, 1 unit.

United States History, 1 unit.

One, two, three or four blocks may be presented. A real equivalent may be presented in place of a block recommended above, but one year's course in general history will not be accepted.

CIVICS. $\frac{1}{2}$ or 1 unit. This may comprise the study of government in its relation to either the local community or the nations, or both. It may be combined with history or economics in the construction of an elective unit.

ECONOMICS. $\frac{1}{2}$ unit. A knowledge of the fundamental principles of economic science as presented in a good elementary treatise.

Science

BOTANY. 1 unit. A study of the life histories of types from the main groups of plants, with a series of simple physiological experiments. At least two-thirds of the course should consist of laboratory work. For further details see the report of the committee of the Wisconsin State Teachers' Association for 1902 on a high school course in botany.

If impossible to give a full year's work to the subject, botany may be combined with physical geography, physiology and zoology to construct units.

CHEMISTRY. 1 unit. A study of the more common elements and their compounds. This course should include about four or five actual hours of work a week in the laboratory, and two or three periods a week in the classroom throughout the year. Two laboratory periods are considered as equivalent to one class exercise. A laboratory notebook must be kept.

PHYSICS. 1 unit. Not less than three classroom periods a week, and not less than four actual hours of work a week in the laboratory. A record of all work done should be kept in a notebook. Any standard textbook may be used.

PHYSICAL GEOGRAPHY. 1 unit. To include: (1) The principles as presented in the best recent textbooks, which give adequate treatment of the atmosphere and ocean, and emphasize the development and influence of topographic forms. (2) Field study adapted to the locality; every candidate must submit a statement of the field trips taken by him. (3) The interpretation and habitual use, in the laboratory, of topographic maps, weather maps, charts, and pictures.

If impossible to give a full year's work to the subject, physical geography, botany, physiology and zoology may be combined to construct units.

PHYSIOLOGY. $\frac{1}{2}$ unit. Human anatomy, histology, and physiology, and the essentials of hygiene. The textbook work, equivalent to that given in Martin's *The Human Body, Briefer Course*, must be illustrated by charts and models, and supplemented by anatomical demonstrations and chemical experiments.

ZOOLOGY. 1 unit. Laboratory work (at least two-thirds of the course) including eight to ten types of animals, with careful descriptions and drawings; a study of life histories, habits and relation to environment. Class exercises based on any standard textbook.

Languages

GREEK. 2 units. Grammar; Xenophon's *Anabasis*, four books; Homer's *Iliad*, three books, or an equivalent amount of the *Odyssey*; Greek composition.

LATIN. 4 units. (1) Grammar and elementary book; (2) *Caesar*, books I-IV; (3) *Cicero*, six orations (selections from the letters may be substituted for two orations); (4) *Virgil*, six books; composition, preferably in connection with *Caesar* and *Cicero*.

These requirements are planned with special reference to the needs of those candidates who propose to continue the study of ancient or modern languages or of history.

3 units. (1), (2) and either (3) or (4) above.

2 units. (1) and (2) above.

Real equivalents will be accepted for any part of these requirements.

Latin 1 and 3 in the University cover substantially the work done in the high school. They may be credited towards the bachelor's degree and used to satisfy language requirements. No such credit will be given for high school Latin.

GERMAN. 2 units—Elementary. Applicants should be able to pronounce at sight simple German prose similar to the more difficult portions of *Glück Auf*, and to prove their understanding of the texts read, either by answering simple German questions based upon the texts, or by translating into good idiomatic English, help being given upon unusual words and constructions. They should also be able to put easy English sentences into German. The required amount of grammar is contained in the current beginners' books, such as Spanhoofd's *Elementarbuch* or Manfred's *Ein praktischer Anfang*. About 75 of the more usual strong verbs are required. Applicants should have read not less than 200 pages of easy German, chiefly modern narrative prose, but including some simple poems and possibly one or two short plays.*

3 units—Intermediate. In addition to the work outlined for 2 units, applicants should have read from 300 to 400 pages of moderately difficult prose and poetry, with constant practice in speaking and writing, based upon portions of the texts read. Part of this amount should be done as outside reading and reported on for content only. The study of grammar should be continued.*

* Approximately corresponding to the "elementary," "intermediate" and "advanced" courses as outlined in the *Report of the Committee of Twelve* (D. C. Heath & Co., Boston; price 16c.) See also the *High School Course in German*, No. 2 of the High School Series of the Bulletin of the University of Wisconsin. (Secretary, Committee on Accredited Schools, University of Wisconsin, Madison, Wisconsin.)

4 units—Advanced. Besides the work outlined for 2 and 3 units, applicants should have read from 400 to 500 pages of standard literature in prose and poetry, with increasing attention to literary appreciation and the necessary biographical and historical background. The use of outside reading should be continued. Applicants should be able to understand any ordinary modern German text that is free from unusual difficulties, to write a brief German essay on a simple topic relating to the texts read, and to follow a recitation conducted in German.*

Students without preparation in German enter course 1a. Those who have had one year of high school German enter course 1b. Those who have had two years enter course 2a. Those who have had three years enter course 2b. Those who have had four years should enter course 14 if they matriculate in the first semester, and course 3 if they matriculate in the second semester, provided they are able to devote four hours per week to German. Otherwise they may make two or three hour programs by electing from courses: 15, 17, 18, 20, 40, and 41. Students whose general course of study requires a special class in German elect such courses as 3Sc, 3C or 16.

FRENCH—2 units—Elementary. The applicant should have a thorough knowledge of the grammatical forms of the language, and possess a sufficient vocabulary to read simple texts with ease.

Not less than 300 pages of simple French should have been read with careful attention paid to pronunciation during the entire period.

3 units—Intermediate. In addition to the work outlined for two units, the applicant should have read at least 400 pages of French chosen from nineteenth century classics, and done considerable work in oral and written composition.

4 units—Advanced. One year of high school work in addition to the work outlined for 2 and 3 units. In addition to the work outlined for 3 units, the applicant should have read at least 500 pages of classic and modern French literature. He should be able also to write a short French composition and show his understanding of a simple lecture in French by answering questions upon it in the same language.

For detailed information as to grammars, texts, etc., see *A Four Year High School Course in French* which may be obtained on application to the Department of Romance Languages.

* Approximately corresponding to the "elementary," "intermediate" and "advanced" courses outlined in the *Report of the Committee of Twelve*. (D. C. Heath & Co., Boston; price 16c.) See also the *High School Course in German*, No. 2 of the High School Series of the Bulletin of the University of Wisconsin. (Secretary, Committee on Accredited Schools, University of Wisconsin, Madison, Wisconsin.)

SPANISH. 2 units. Work corresponding to that done in the elementary courses of the University. The student should have acquired a correct pronunciation of the language, should be able to translate freely simple Spanish texts, and should possess an accurate knowledge of the grammatical principles of the language and of its regular and irregular verbs. The work in grammar should be approximately that found in any standard Spanish grammar. About 300 standard pages of text should have been translated. The student should be taught the Castilian pronunciation.

3 units—Intermediate. In addition to the work outlined for two units, the applicant should have read at least 400 pages of Spanish chosen from nineteenth century authors, and done considerable work in oral and written composition.

4 units—Advanced. One year of high school work in addition to the work outlined for 2 and 3 units. In addition to the work outlined for 3 units, the applicant should have read at least 400 pages of modern Spanish literature. He should be able also to write a short Spanish composition and show his understanding of a simple lecture in Spanish by answering questions upon it in the same language.

For detailed information see pamphlet issued by the Department of Romance Languages entitled *A Four Years' Course in Spanish*.

Vocational Subjects

(Including agriculture, commercial work, domestic science, and manual arts.)

Owing to the present state of development of the vocational subjects in the high school curriculum, requirements in agriculture, domestic science, commercial work, and manual arts are not defined. The acceptance of work for admission will be based upon a special inspection; and the approval of courses will depend primarily upon adequate equipment and efficiency of instruction.

A tentative statement of acceptable units in these subjects is:

Agriculture. Plant Production, Agricultural Chemistry, and Soils, 1 or 2; Animal Husbandry, 1; Rural Economics, Farm Management, and Farm Mechanics, 1 or 1½.

Commercial Work. Bookkeeping, 1 or 2; Stenography and Typewriting, 1 or 2; Commercial Arithmetic, ½; Commercial Law, ½; Commercial Geography, ½.

Domestic Science. Food Study, 1 or 2; Textiles and Clothing, 1 or 2; House Problems, 1.

Manual Arts. Mechanical Drawing and Shopwork, 1, 2, 3, or 4; Freehand Drawing and Design, 1 or 2.

ADMISSION UPON EXAMINATION

The regular examinations of the University are two in number, one in June and one in September. For the current year the earlier examinations will be held on Thursday and Friday, June 14 and 15, beginning at 9 o'clock A. M. The later examinations will be held on Monday and Tuesday, September 24 and 25, beginning at 9 o'clock A. M. Students who are in doubt as to their qualifications should present themselves in June. All candidates must be present at 9 o'clock on the first day of the examination. No special examinations are given.

Candidates for admission to the University may divide the subjects and take the examinations in two trials; but a failure to pass all of the subjects in the two trials will necessitate a complete re-examination. For the character of the entrance examinations, see pp. 94-101.

ADMISSION UPON CERTIFICATE

ACCREDITED SCHOOLS. Any high school or academy in the state whose course of instruction covers the branches requisite for admission to the University may be admitted to its accredited list of preparatory schools after a satisfactory examination by a committee of the Faculty. Upon application made by an officer of any high school or academy in the state to the Secretary of the Committee on Accredited Schools, the University will examine the school with reference to placing it upon its accredited list of preparatory schools. The examination, which will be conducted by a committee of the Faculty, will cover the course of study and methods of instruction in the school. No school will be placed upon the list whose course of study is not fully equal to the four-year course of high schools recommended by the State Superintendent. The graduates of such an approved school will be received by the University without examination, on the presentation of a certificate showing the satisfactory completion of the fourteen required units, and containing the recommendation of the principal. Forms of such certificates, prepared by the University, must be used, and may be obtained from the Registrar. *These certificates should be sent to the University before August 1.*

Any high school or academy with a complete four-year course whose course of instruction does not include foreign language may be admitted to the accredited list under the conditions stated above, provided its course of instruction covers fourteen units in the subjects accepted for admission to the University.

Principals of accredited schools are requested to note the statement regarding the examination of freshmen in English (see p. 95), and also the statement regarding the additional requirement and examination in algebra for admission to the College of Engineering (see p. 269).

The University desires to keep itself fully informed regarding the work of its accredited schools by means of annual reports and frequent inspections. Every accredited school is required to report each year concerning its teachers, course of study, methods of instruction, and material equipment. Blank forms are furnished by the University for this purpose. The University sends out inspectors at its own expense and at the convenience of the members of the staff. Especial attention is called to the necessity of promptly notifying the Secretary of the Committee on Accredited Schools of changes in the dates of examinations and vacations. The list of accredited schools will be published near the end of the academic year; it will be sent to all accredited schools and to all high schools in the state. Copies may be had upon application to the Registrar.

Graduates of four-year non-accredited schools in Wisconsin will be admitted without examination, on probation, upon the favorable recommendation of the principal, where the graduate has fully and satisfactorily covered in his high school course the full requirements for admission to the University.

SCHOOLS OUTSIDE WISCONSIN: The following regulations will apply to graduates of schools without the state:

1. Graduates of secondary schools outside Wisconsin, included in the current list of accredited schools of the North Central Association, will be admitted when recommended and certified by the principal as indicated on page 102, provided the minimum admission requirements of the University be fulfilled in all cases.

2. Graduates of other secondary schools outside Wisconsin will be admitted when properly recommended and certified; provided (a) That the school maintains on the basis of regular inspection accredited relationship with the state university, or other university within the state, included in the membership of the Association of American Universities. The state university must maintain the same standard of admission requirements as those institutions

belonging to the Association of American Universities. (b) That the minimum admission requirements of the University of Wisconsin be fulfilled both as regards number of units and character of work. In such cases the character of the work submitted shall be interpreted to mean an average standing of "good".

Credentials properly certified by the principal on forms provided by the University must be submitted for approval by the University before August 1.

Advanced credit for high school work may be granted to students with satisfactory average standings presenting more than fifteen units accepted for admission, provided: (1) the subjects in which advanced credit is sought are the general subjects accepted for admission to the University; (2) the work is as advanced as work given in the freshman year; (3) the student's course of study in which credit is desired be approved by the chairman of the department; and (4) the students pass a satisfactory examination at least two hours in length, held at the University before or during the Christmas recess. No advanced credit will be given for work in language unless it be in excess of six units of language offered for admission, nor will advanced credit be given for less than three semester hours.

ADMISSION WITH ADVANCED STANDING

College Courses—Wisconsin Normal Schools

The University will accept for credit to advanced standing the work of the two years in college studies now undertaken by the state normal schools of Wisconsin. The credits named hereafter will be given to students who, at the time of entering the normal school, were fully prepared to enter the freshman class at the University. The standard amount of credit will be thirty credits for one year's full work, and sixty credits for two years' full work in studies approved by the several colleges and taken substantially in the order required of students at the University.

The following credits may be taken in the several colleges and courses:

A. College of Letters and Science.

Bachelor of Arts and Bachelor of Philosophy (General Course)

—Sixty credits in required work and work regularly offered by the University to freshmen and sophomores.

Bachelor of Philosophy (Course for Normal School Graduates)—Junior rank.

Bachelor of Science—A special amount as may be determined by the committee on advanced standing.

B. College of Agriculture.

Required and elective language, mathematics, and science, approved as equivalents by the College of Letters and Science, to the amount of sixty credits. Technical agricultural work credited only if given by special and properly qualified teachers.

C. College of Engineering.

Credit for language and science, so far as these are required in Engineering, on the same basis as credit given in the College of Letters and Science. For mathematics, usually less credit; ordinarily one semester less than the amount taken in normal school. In mechanical drawing, credit only so far as work is equivalent, as a technical study, to the course in the University. All drawings and plates made at the normal school must be submitted by a student who desires credit.

D. Law School and Medical School.

Students who are entitled to sixty credits in college studies will be admitted to the Law School, and also to the Medical School if they have taken the studies required for entrance to that school.

Students from the college courses in normal schools will not be granted more than two years' credit toward graduation; nor will they be granted more than sixty credits unless they enter a course whose first two years require more than sixty credits. In such case they may be granted more than sixty credits if the studies offered include the requirements of the university course.

Teachers Courses—Wisconsin Normal Schools

Graduates of the Wisconsin state normal schools who desire to become candidates for degrees will be given credits as follows:

A. *Bachelor of Philosophy, (Course for Normal School Graduates)*

—Graduates of the two-year departmental courses in the state normal schools who have previously graduated from four-year high school courses and who upon graduation from the normal school are entitled to become candidates for an unlimited state certificate, will, upon presentation of their high school and normal

school standings and certificates of graduation, be admitted to the junior year.

Graduates of the two-year departmental courses who are not high school graduates must present a complete record of their academic training and teaching experience. If this record is the substantial equivalent of high school graduation and two years of normal school work, such students will be given junior rank.

B. *Bachelor of Arts, and Bachelor of Philosophy (General Course)*—Graduates of the two-year departmental courses and of the specialized teachers courses who desire to become candidates for the degrees of *Bachelor of Arts* or *Bachelor of Philosophy (General Course)* must submit for evaluation by the Committee on Advanced Standing a full statement of their high school standings and certificates of graduation. The amount of advanced standing granted ordinarily varies from 30 to 60 credits, depending upon the nature of the work taken in the normal school. The following conditions will be applied:

1. Graduates of the two-year departmental courses of normal schools must satisfy university requirements for the degrees (see pp. 112-119).

2. Application for laboratory credit in science must be accompanied by laboratory or field books.

3. No credit will be given for any work in a normal school done in a quarter, term, or semester in which more than 20 hours per week, exclusive of physical education and similar work, were taken, except on special recommendation of the president of the school.

4. Graduates of the two-year departmental teachers courses of normal schools will not be granted more than two years' credit toward graduation; nor will they be granted more than sixty credits unless they enter a course whose first two years require more than sixty credits. In such case they may be granted more than sixty credits if the studies offered include the requirements of the university course.

The University has given no consideration to the question of credit for the newly established three-year courses in the normal schools, the matter having been postponed at the request of the normal school presidents. In making the above statement in regard to credit for the two-year departmental courses, there is no implication that additional credit will be given for the three-year courses.

C. *Bachelor of Science.* Graduates of the departmental courses who desire to become candidates for the *Bachelor of Science* degree must comply with substantially the same requirements as for the *Bachelor of Arts* degree.

Normal Schools Outside Wisconsin

Graduates and students of normal schools of other states will be admitted to the University with such advanced credit as their previous work entitles them to; except that no credit will be given greater in amount than that granted to graduates of any normal school by the state university of the state within which the normal school is situated. In addition to the normal school certificate and the certificate of high school work completed such graduates or students must present an official statement from the university of the state in question as to the amount of advanced credit that would be given for the work so completed.

See page 120 for the requirements for the degree of *Bachelor of Philosophy (Course for Normal School Graduates)*.

Students From Other Colleges and Universities

Students from other institutions who have pursued standard college courses equivalent to those of the University will be admitted, and will receive credit for such courses upon the presentation of proper certificates of creditable standing and honorable dismissal. Blank forms for this purpose are provided by the University; and transfer records from other institutions are required to be made out on these forms and submitted for consideration in advance of the opening of the University. Transfer records must be accompanied by a letter of honorable dismissal.

The University of Wisconsin long ago proposed and has maintained arrangements with the colleges and normal schools of the state by which the College of Letters and Science has given credit for the work of freshman and sophomore years in standard college courses equivalent to those of the University. The number of students who enter the University with advanced standing under this arrangement has constantly increased. Throughout these years the College of Letters and Science has emphasized its belief that it was not to the advantage of the student nor of the University to transfer to this college at the opening of the senior year or in general, later than the opening of the junior year. The Faculty desires to give as much as two years of teaching to persons who are

to receive the bachelor's degree in courses which normally require four years, and it believes that in all but exceptional cases such a degree should mean at least two years of work at the institution granting it. On the other hand, the Faculty fully recognizes the wisdom of the principle involved in giving credit for junior college work, and is glad to accept students of suitable preparation as sophomores or juniors.

Beginning with the academic year, 1917-18, a minimum of 45 credits *in residence* will be required for the College of Letters and Science. This will ordinarily mean attendance for one and one-half years or one year and two summer sessions at this University. (See further p. 123.)

By arrangement with Beloit College, Lawrence College, Ripon College, Carroll College, Milwaukee Downer College, the Milwaukee German-American Seminary, (provided the candidate majors in German), Marquette University, and St. Clara's College, students of these institutions who have satisfactorily completed the work of the sophomore year will be admitted to the junior rank in the College of Letters and Science. In case of migration at an earlier period than the end of the sophomore year, proportional credit will be given. Students who complete two years of work at Beloit, Lawrence, Ripon, Carroll or Marquette will be admitted to the College of Engineering of the University of Wisconsin on the same conditions as students who transfer to that college from the College of Letters and Science of the University of Wisconsin. Students of senior rank from Lawrence and Ripon who enter the College of Agriculture or Engineering, the Law School, School of Music, or the Course in Commerce, will receive credit for their professional studies toward graduation in the institution from which they come, to amounts to be determined by those institutions.

Students of other colleges of good standing who have not taken standard courses, but who have studied at least one year in the college proper, may be admitted to the University provisionally. In such cases the amount of credit will be determined by the Committee on Advanced Standing. The University reserves the right to test by examination the records presented.

No person will be admitted to the University later than November 1 of the year in which he expects to graduate.

ADULT SPECIAL STUDENTS

Persons twenty-one years of age, who do not possess all of the requirements for admission and are not candidates for a degree, are permitted to enter the College of Letters and Science and the College of Agriculture upon giving satisfactory evidence that they are prepared to take advantageously the studies which they desire. Such students are generally prepared to select their studies only from courses open to freshmen. If they desire to take studies to which only advanced students of these colleges are regularly admitted, they must show special preparation or special necessity for such courses. This privilege of admission is granted in the College of Engineering only to such students as are able, on examination, to meet all the entrance requirements in mathematics. The privilege of admission on the adult basis is not granted in the Law School.

Candidates applying for admission on the above basis are required to present a detailed statement of their preparatory studies at the time of their admission. Adult special students who desire subsequently to become candidates for a degree must satisfy the regular entrance requirements.

DEGREES

First Degrees

The following baccalaureate degrees are conferred upon those who have successfully completed the prescribed courses of study and who have complied with all other requirements of the University:

Academic

BACHELOR OF ARTS, upon the graduates in the College of Letters and Science, except those from the course without required foreign language, the course for normal school graduates, and from the courses in Chemistry, Pharmacy, and Medical Science.

BACHELOR OF PHILOSOPHY (General Course), upon the graduates from the course without required foreign language.

BACHELOR OF PHILOSOPHY, (COURSE FOR NORMAL SCHOOL GRADUATES), upon the graduates from the course for normal school graduates.

Professional and Technical

BACHELOR OF LAWS.

BACHELOR OF MUSIC, upon graduates from the four-year course in Music.

BACHELOR OF SCIENCE (AGRICULTURE). ;

BACHELOR OF SCIENCE, HOME ECONOMICS COURSE.

BACHELOR OF SCIENCE, CIVIL ENGINEERING COURSE.

BACHELOR OF SCIENCE, MECHANICAL ENGINEERING COURSE.

BACHELOR OF SCIENCE, ELECTRICAL ENGINEERING COURSE.

BACHELOR OF SCIENCE, CHEMICAL ENGINEERING COURSE.

BACHELOR OF SCIENCE, MINING ENGINEERING COURSE.

BACHELOR OF SCIENCE, CHEMISTRY COURSE.

BACHELOR OF SCIENCE, PHARMACY COURSE, upon graduates from the Four-year Course in Pharmacy.

BACHELOR OF SCIENCE, MEDICAL SCIENCE COURSE.

GRADUATE IN AGRICULTURE, upon graduates from the Two-year Course in Agriculture.

GRADUATE IN PHARMACY, upon graduates from the Two-year Course in Pharmacy.

MASTER OF PHARMACY, as a second degree upon GRADUATES IN PHARMACY.

A graduate of any of the courses may receive the baccalaureate degree of any other course by completing the additional studies taken in one year, and for a second bachelor's degree in the College of Letters and Science there are required one year's additional study and a special thesis.

The conditions on which the bachelor's degrees are given will be found stated under the appropriate colleges and courses on subsequent pages.

Higher Degrees

The University confers in course the degrees of *Doctor of Philosophy* and *Doctor of Public Health*. The degree of *Master of Arts* is conferred as a second degree upon candidates who have received the degree of *Bachelor of Arts* or an equivalent, and the degree of *Master of Science* upon candidates who have received the corresponding baccalaureate degrees. The degree of *Master of Philosophy* is conferred upon candidates who have received the degree of *Bachelor of Philosophy* at the University of Wisconsin. Such candidates may receive the degree of *Bachelor of Arts* or *Bachelor of Science* by doing supplementary work. Candidates who have taken the degree of *Bachelor of Science* in one of the engineering courses, may receive the degree of *Civil Engineer*, *Mechanical Engineer*, *Electrical Engineer*, *Chemical Engineer*, or *Mining Engineer*.

The conditions on which these higher degrees are granted will be found stated under the Graduate School, and also under the various colleges.

COLLEGE OF LETTERS AND SCIENCE

EDWARD A. BIRGE, Dean.

There are two general courses in the College of Letters and Science: one leading to the degree of Bachelor of Arts, in which foreign language is a required study; the other leading to the degree of Bachelor of Philosophy (General Course), in which other required studies may take the place of foreign language.

There are also special courses in commerce, journalism, and medicine, leading to the degree of Bachelor of Arts; in chemistry, pharmacy, and medicine, leading to the degree of Bachelor of Science; in music, leading to the degree of Bachelor of Music; and for normal graduates, leading to the degree of Bachelor of Philosophy (Course for Normal School Graduates). The requirements for degrees in these special courses will be found under the appropriate heads. (See Index.)

I. General Conditions for the degrees in the General Courses leading to Bachelor of Arts and Bachelor of Philosophy

1. Credits, Military Drill, Physical Education

The *credit* is the unit for computing the amount of work required for graduation. This is equal to one hour of recitation or lecture per week for one semester. Students are expected to secure 15 credits per semester in recitations, lectures, and laboratory work, making 30 credits per year, and 120 for the course. 120 grade points are also required for graduation. (See p. 81. for details.) In addition men are required to take 2 hours per week of physical training during the first two years and secure a total of 4 credits. They are also required to drill 2 hours per week during the first two years, giving 4 credits. (For details see Department of Military Science and Tactics.) Women are required to take 4 hours of physical training per week during the first two years and secure 8

credits. The total requirements for classroom work, military drill, and physical training are, therefore, 128 credits.

Each student is required to take recitation and laboratory work to an amount which will give 14-16 credits per semester, besides military drill and physical training in the case of students from whom these exercises are required. A student who desires to secure fewer than 14 credits must apply for permission through his adviser to the dean. In case a student has received grades of *good* in all studies of the preceding semester, he may take extra studies to an amount not exceeding 18 credits. No student will be permitted to receive more than 18 credits toward graduation in one semester in classroom work except by permission of the Faculty, obtained in advance.

For the special requirements of candidates for the degree of Bachelor of Arts in the Commerce Course or the Medical Course see announcement under the appropriate heads.

Students transferring from the courses in Commerce or Medicine, or from another college of the University, will receive no more than 15 credits a semester toward graduation for work already done, except in semesters in which all standings are 85 or above. They will not receive credit for technical studies of another college, except to the amount and under the conditions stated under Election of Studies in Other Colleges, p. 114

2. Major Study and Thesis

Major Study.—At the beginning of the sophomore or the junior year every candidate for these degrees shall select as his major subject the work of some one department in the College of Letters and Science. This department will determine the manner in which the work of the major shall be completed; the work required in the major (including thesis and required work) shall not be less than 20 credits, nor more than 40 credits; the thesis receiving 4 credits.

Thesis.—All candidates are required to present a graduating thesis, except as provided below. The subject of the thesis shall be approved by the student's adviser and filed with the chairman of the department in which the candidate is taking his major. It shall represent some phase of the student's work in the major study and shall be of a scholarly character. It shall be typewritten and bound according to specifications furnished by the Librarian of the University; and before it is accepted it shall be approved by

the instructor under whom the work has been done. It shall be deposited in the University Library by the Thursday before Commencement.

One of the following substitutes for the thesis may be allowed when in the judgment of the department, it is advisable:

1. A course restricted to seniors and graduates, in groups of not more than ten, with written reports of independent work done in connection with the course under the supervision of the instructor.

2. An individual reading or research course, with frequent conferences between student and instructor and with written reports of independent work.

These substitutes shall involve work equivalent to at least 4 credits, and shall be so certified by the instructor on the report card of each student taking either substitute. The several papers of each student shall deal with correlated subjects, and shall be prepared with due attention to expression and to logical form. Before any student's papers shall be finally accepted as a whole, they shall be typewritten and bound together according to specifications obtaining in the case of the thesis. They shall be deposited in the University Library by the Thursday before Commencement.

3. Electives

All work not included in the required studies of each course (See pp. 115 and 118.) is elective, but there shall not be taken in any one department more than 40 credits, including required work in excess of 6 credits, major, and electives. High school work for which university credit is given shall not count as a part of these 40 credits.

4. Election of Studies in Other Colleges

Candidates for these degrees are allowed to elect in the College of Mechanics and Engineering, the College of Agriculture (including the Course in Home Economics), the Law School, or State Library School, studies to an amount not exceeding the equivalent of 20 credits. The conditions under which these studies may be elected are as follows:

1. Before electing studies in other colleges the candidate must have completed the work of the freshman and sophomore years in the College of Letters and Science, including those studies which come normally in freshman and sophomore years.

2. Studies in other colleges may be elected only by students who spend at least two full years in attendance at the University before receiving the bachelor's degree. They may not be elected by students from other institutions who enter the University with a higher rank than that of junior, or by students who through correspondence study reduce the amount of required attendance at the University below two years.

3. Certain courses primarily intended for students of other colleges (such as Mathematics 51) are listed in the departmental announcements of the College of Letters and Science. Such courses are open to any student of suitable preparation in the same way as the courses primarily intended for the students of the College of Letters and Science.

4. Courses in other colleges and schools which are parallel to courses offered in the College of Letters and Science may not be elected for credit without the consent of the Dean of the College of Letters and Science.

5. Not more than 5 of the 20 credits may be secured in either semester of the junior year.

II. Required Studies for the General Course leading to the degree of Bachelor of Arts

a. English: Six credits (three credits per semester for two semesters); to be taken in the first year of residence.*

b. Foreign Language: Thirty-two credits in two, or more, foreign languages are required for graduation. These credits may be secured partly in high school and partly in the University, or wholly in the University. High school work is accepted at the rate of one unit for four university credits up to the amount of six units or twenty-four university credits. In general, students are required to take a minimum of eight credits in one foreign language in the college. Any student, however, who presents more than six units for entrance will be allowed to count the additional unit or units toward the total requirement of thirty-two credits, provided he passes a special examination, given by the college, upon four units of his high school work in one language. This examination will normally be given before the Christmas holidays in the first semester of the student's freshman year.

* On the completion of course 1, a provisional pass mark is given; if at any time later in his course a student is reported as deficient or careless in English composition he may be required to take additional work in that subject.

Students must have at least four units of high school work, or sixteen credits in the college, in one language, or the equivalent in combined high school and college work in one language.

Similarly, students must have at least two high school units, or eight university credits, in a second language.

One high school unit in language will be accepted only in case the student successfully continues this language in the college for at least one semester.

A student, therefore, who has two years of high school language needs twenty-four additional credits for graduation; if he has three years he needs twenty credits; etc.

French, German, Greek, Hebrew, Latin, Norse, and Spanish may be offered either for entrance or graduation.

c. Two of the following: natural science, 10 credits; mathematics, 6 credits; history, 6 credits, which must be a three credit course extending through two semesters.

Under natural science are included botany, zoology (or a combined course, Biology 1), chemistry, physics, and geology. All are five credit courses with laboratory work, or field work in geology.

d. Major study, thesis, and electives. See statement p. 113.

Studies of the Freshman Year

In this year one study only is absolutely required: English 1, three times per week. All other studies of the year must be chosen from the following groups:

GROUP I. At least one subject must be taken from this group and not more than 10 credits may be chosen from any one subject.

Greek: 3-5 credits; two semesters.

Latin: 4-5 credits; two semesters.

Hebrew: 4 credits; two semesters.

German: 4 credits; two semesters.

French: 4 credits; two semesters.

Spanish: 4 credits; two semesters.

Norse: 4 credits; two semesters.

GROUP II. At least one subject must be chosen from this group. Not more than 10 credits may be taken in any one subject.

Mathematics:

Algebra: 3 credits; one semester.

Trigonometry: 3 credits; one semester.

These courses in mathematics are repeated each semester.

Science:

Botany: 5 credits; 2 semesters; 2 lectures; 4 laboratory periods, 1 recitation.

Zoology: 5 credits; 2 semesters; 2 lectures, 4 laboratory periods, 1 recitation.

Biology: A year's course arranged by combining Botany 1 (first semester) and Zoology 1b (second semester).

Chemistry: 5 credits; 2 semesters; 3 lectures, 3 laboratory periods, 1 recitation.

Physics: 5 credits; 2 semesters; 3 lectures, 2 laboratory periods, 2 recitations; or 2 lectures, 1 laboratory period, 3 recitations.

Geology: 5 or 3 credits; 2 semesters.

Astronomy: 3 credits; 1 semester. (This course cannot be offered as part of required science).

History:

Ancient History: 3 credits; 2 semesters.

English History: 3 credits; 2 semesters.

Medieval History: 3 credits; 2 semesters.

Students may secure 5 credits in history by taking two courses. In this case they will do the full work of one course, receiving 3 credits; in the other course they will omit much of the collateral reading, reports, etc., and will receive 2 credits.

Drawing: 3 credits; 1 or 2 semesters.

The student may take 14, 15, or 16 credits from these studies. The combination may be made by adding to English (3 credits) two foreign languages from Group I (6 to 10 credits), with one subject from Group II (3 to 5 credits); or by taking but one foreign language (3 to 5 credits) with two subjects from Group II (6 to 10 credits). Students are advised to carry on the language, or languages, which they have had in preparatory schools. Those who come with only two years of language preparation will be expected to continue this preparatory language during the freshman year.

The following courses open to freshmen will be found described under Departments of Instruction on the following pages. The figures following the name of the department refer to the number of the course as given under the proper heading under Departments of Instruction. Advanced courses in language are open only to students of suitable preparation.

English 1, Greek 5a, 5b, 7, 10, and 11, Latin B, A, and 6, German 1a to 3, and 14, French 1, 2, 10, 11, 13, 14, and 15, Mathematics 1, 2, 3 or 4, 7, 8, and 51, 52, Biology 1, Botany 2, Zoology 1b, Chem-

istry 1, Physics 1, and 1Sc., Geology 2 and 4, Astronomy 1, History 1, 5, and 10, Drawing 1, 2 (Freehand or Mechanical), Journalism 1 (no credit). Only the five credit courses in science can be counted toward the science required for graduation.

III. Required Studies for the degree of Bachelor of Philosophy (General Course).

All of the studies prescribed below are to be taken in college.

- a. English, to be taken in freshman year, 10 credits (5 credits per semester for two semesters) *for students who do not elect foreign language in freshman year.*
6 credits (3 credits per semester for two semesters) *for students who elect foreign language in freshman year.*
- b. Science and mathematics. A total of 20 credits to be taken in year courses.
- c. Two of the following groups:
 1. Philosophy or mathematics, 10 credits. Mathematics may not be offered both here and under b above.
 2. History, 10 credits.
 3. Foreign language, 14 credits. Not more than 8 of these may be in a beginner's course.

The total number of prescribed credits is therefore 40 to 44, in addition to English.

The departments and courses open for credit are the same as in the B. A. course. See statement on preceding pages.

Studies of the Freshman Year

The studies of the freshman year are in general required, as they are in the B. A. course. The same studies are open to freshmen in this course as to those in the B. A. course and on the same terms. See statement on preceding pages, under B. A. course. Students may readily make the following combinations, in which the numbers represent the number of credits per semester.

- a. Without foreign language.
 1. English 5 credits, history 5, science 5.

2. English 5 credits, science 5, mathematics 3, history 3.
 3. English 5 credits, science 5, mathematics 5.
 4. English 5 credits, history 5, mathematics 5.
- b. With foreign language.
1. English 3 credits, language 4 or 5, history 3, science 5.
 2. English 3 credits, language 4 or 5, history 5, mathematics 3.
 3. English 3 credits, language 4 or 5, science 5, mathematics 3.
 4. English 3 credits, language 4 or 5, mathematics 5, history 3.

Students who may elect as indicated in group (b), will be in line, if they choose to do so, to go on toward the B. A. degree instead of the Ph. B. They may continue foreign language in the sophomore year, and offer it as part of the prescribed credits for the Ph. B. degree, or the study may be discontinued at the end of freshman year. In the latter case the student will need to offer 10 credits in philosophy or mathematics, and 10 in history. Students may elect two foreign languages, but such students will naturally enter the B. A. course.

The following sciences are open to election by freshmen as part of the prescribed studies: botany, zoology, chemistry, physics, geology.

The following courses in history are similarly open to election by freshmen: ancient history, English history, medieval history. These are three credit courses. The student may secure five credits by taking the full work of one course and the lectures, etc., of another, omitting much of the collateral reading, etc., as prescribed by the department.

The following foreign languages are similarly open to election by freshmen: Greek (3-5 credits), Latin (4-5), German (4), French (4), Spanish (4), Norse (4), Hebrew (4).

IV. Requirements for a Degree in the Course in Commerce

Students who have completed the regular four year course of the Course of Commerce will receive the degree of Bachelor of Arts. (See Index.)

V. Requirements for the Degree of Bachelor of Science

Students who have completed the regular four year course of the Course in Pharmacy will receive the degree of Bachelor of Science, Pharmacy Course. (See Index.)

Students who have completed the regular four year course of the Course in Chemistry will receive the degree of Bachelor of Science, Chemistry Course. (See Index.)

VI. Requirements for a Degree in the Course in Medical Science

Students who have fulfilled the necessary requirements will receive the degree of Bachelor of Science, Medical Science Course. (See Index, under Medical School.)

The departments which constitute the Medical School are at present also constituent departments of the College of Letters and Science. The courses offered in these departments are open for election to any students in the College of Letters and Science who are prepared to take them. Candidates for the degree of Bachelor of Arts are not permitted to matriculate in the Medical School for more than one year. Candidates for the degree of Bachelor of Science, Medical Science Course may be registered two years in the Medical School. They may, with the consent of their advisers, elect up to 18 credits per semester, and may confine their work to the science and language groups of studies. The language requirements are those required for admission to the Medical School. (See Index.)

VII. Requirements for the Degree of Bachelor of Philosophy

Course for Normal School Graduates

Graduates of the two-year departmental courses of the state normal schools are admitted to advanced standing in the various courses and colleges of the University on conditions given under

the heading Admission. (See Index.) A special course, leading to the degree of Bachelor of Philosophy (course for Normal School Graduates) has been arranged by the University to meet the needs of most of those who graduate from the departmental courses of the state normal schools. Such graduates are admitted to junior standing in candidacy for this degree. The course contains a minimum required amount of advanced studies in philosophy and education,—6 credits in each—with the privilege of further elections in those subjects. All courses in philosophy, except course 1 (elementary psychology) are open to election by normal school graduates. In education, no elementary course may be elected by a normal school graduate; the courses which he may elect in fulfillment of requirements are explicitly indicated on p. 138 of the catalogue. Departmental teachers courses in the several departments may *not* be elected in fulfillment of the requirements in philosophy and education.

This course also requires a continuous study of one foreign language (Latin, French, or German) during the two years of the course,—that is, a total of 16 credits. Exceptions to this requirement are made in certain cases.* Any student in this course who offers work in foreign language equal in amount to that demanded of candidates for the degree of Bachelor of Arts will not be required to pursue courses in foreign language in the University; and no student will be required to complete more work in foreign language than is demanded for the degree of Bachelor of Arts.

The student must also complete a major in some department on the same conditions as obtain for the B. A. degree. (See p. 113.)

Any advanced courses in the College of Letters and Science for which the student is prepared may be elected by him but the required work, including a minimum of 20 credits in the major study, amounts to at least 48 credits. The student may not take courses that amount to more than 16 credits for the first semester, and he is under the same rules regarding number of hours as the student in the B. A. course. (See p. 112.) It is expected that the normal school graduate will give special attention to preparation for teaching some one branch of instruction, and he may choose his electives

* A normal school graduate who has had altogether five years of experience in teaching will be allowed to substitute for the required work in language sixteen credits in language, literature, history, or philosophy; of which at least twelve credits must be in one of the four fields named. If philosophy is chosen the credit must be in addition to the six credits regularly prescribed. These sixteen credits shall not be in single semesters of courses regularly running through the year, except by special permission; nor shall they be taken in the department of the major subject.

so as to attain this end. He must on entering select the work of some one department as his major study. His adviser will be assigned from that department, and it will be the duty of the adviser to arrange the student's work so that he may satisfy the requirements both of the course and of the major study. These may be satisfied in two years, except in a few departments.

Students in the Course for Normal School Graduates may not elect studies from other colleges, except by special permission. This will ordinarily be granted only when the studies desired are necessary for the future work of the student as a teacher. Application for such permission should be made to the Dean, through the Director of the Course for the Training of Teachers.

Military drill and gymnastic exercises are not required of normal school graduates.

A student who completes the course for normal school graduates may secure the University Teachers Certificate by completing the requirements stated on page 266.

In the first semester the student should begin foreign language, take part of the required courses in philosophy and education, and begin his major study. The course of study will be as follows:

JUNIOR YEAR. Foreign language (each semester), 4 or 5 credits; philosophy or education; major study; electives; total credits first semester, 14-16.

SENIOR YEAR. Continuation of foreign language; completion of required philosophy and education; major study and thesis; electives.

Graduation in Less than Four Years

The attention of students is called to the announcement of the Summer Session of the University, as given on subsequent pages of the catalogue. Work in the Summer Session will be credited in the same way as work in the regular session of the University, and by attendance at one session a total amount of credit may be acquired not exceeding 6 credits.

Candidates for the degree of Bachelor of Arts who desire to graduate in three years may do so by obtaining 17 or 18 credits per semester after the first semester of freshman year, and by attending three summer sessions, thus securing a total of 120 credits. Permission to take work to this amount will be given only to students whose standing in their studies is wholly satisfactory. No credit will be given for repetition in the Summer Session of studies taken in the

regular session of the University, or for repeating in the University work done in the summer. Students will need to select carefully their work for the summer with reference to the required and elective studies of the course in which they intend to graduate. The Summer Session offers exceptional opportunities for the preparation of a senior thesis. Any student who expects to shorten his course by means of the Summer Session should consult his adviser in selecting his studies.

Period of Residence

Beginning with the academic year 1917-18, 45 credits will be the minimum number of credits to be obtained *in residence* by candidates for degrees in this college. This will ordinarily mean attendance for one and one-half years or one year and two summer sessions at this University, but the credits may be secured by any combination of residence during semesters and summer sessions.

Students must not expect to take the work of the major study and the thesis in another institution or by correspondence. These studies should normally come at the end of the course, and candidates for degrees must, therefore, expect to take their final work in residence.

Student Advisers

Upon entrance, each student in the College of Letters and Science is assigned to a member of the Faculty who acts as his adviser during the freshman and sophomore years. At the beginning of the junior year, when the student has selected his major study, a member of the department in which his major is chosen becomes his adviser. Each semester, the student is required to consult his adviser concerning the choice of studies and the adviser must give his approval before the student is permitted to enter classes.

The University Teachers Certificate

In accordance with the statutes of Wisconsin, certificates are issued to all graduates of a regular collegiate course who complete the course in pedagogical instruction prescribed by the University. This certificate, when presented to the State Superintendent, entitles the holder to receive a license to teach in any public school in Wisconsin for one year, renewable for a second year after one year of successful experience. Graduates who present satisfactory evi-

dence of good moral character and two years of successful teaching in the Wisconsin public schools, after graduation, are entitled to receive from the State Superintendent an unlimited state certificate.

For requirements for teachers certificate, see page 251.

Honors in the College of Letters and Science

Honors and High Honors are awarded at the end of the sophomore year and at graduation.

Sophomore Honors and *Sophomore High Honors* are awarded on the basis of a minimum of two full years' work (not less than 60 credits) acquired in residence. A student securing 135 grade points* during these two years is awarded *Sophomore Honors*; a student securing 165 grade points is awarded *Sophomore High Honors*.

Senior Honors and *Senior High Honors* are awarded at the completion of at least two full years' work (not less than 60 credits) acquired in residence after the completion of sophomore work. A student securing 135 grade points during these two years is awarded *Senior Honors*; a student securing 165 grade points is awarded *Senior High Honors*.

Thesis Honors will be given for an exceptionally fine or original thesis, without consideration of the student's record in other work.

Senior Honors and *Senior High Honors* are published in the Commencement Day program. *Sophomore Honors* and *Sophomore High Honors* are published in such a manner as the dean of the college shall consider proper.

*See "Grade Point System", p. 81.

DEPARTMENTS OF INSTRUCTION

Abbreviations in the announcement of courses: Yr., throughout the year; I, given during the first semester; II, given during the second semester, I or II, given each semester; cr., credits, i. e., hours of credit. Unless otherwise stated, the number of credits per semester is given.

ANATOMY

PROFESSOR BARDEEN (chairman); ASSOCIATE PROFESSOR MILLER;
INSTRUCTOR SKAVLEM; ASSISTANTS BURNS, RYAN, STRASSER.

For full description of the courses offered in this department, see announcements under Medical School.

For Undergraduates and Graduates

- 105. Comparative Anatomy. II; 3 cr.
- 110. Histology and Organology. I; 4 cr.
- 115. Mammalian Embryology. I or II; 2 cr.
- 121. Human Anatomy. Yr.; 6 cr.
- 122. Topographical Anatomy. II; 3 cr.
- 123. Special Human Anatomy.
- 126. Neurology. II; 4 cr.
- 130. Advanced Anatomy.
- 131. Historical Seminary.

For Graduates

- 235. Investigation under direction.

ASTRONOMY

•
PROFESSOR COMSTOCK.

For Undergraduates

1. General Astronomy. I; 3 cr. The fundamental concepts of astronomy supplemented by a direct study of the sky. Open to freshmen. No previous mathematical training required.

6. Astronomical Practice. II; 2 or 3 cr. Determinations of time, latitude, longitude, and azimuth with portable instruments. Drill in numerical computations. Planned for juniors and seniors in Civil and Sanitary Engineering.

7. Advanced Field Astronomy. Yr.; cr. to be arranged. Spherical astronomy; the more refined methods for determining time, latitude, and azimuth; elementary applications of the method of least squares. Prerequisite: course 6.

13. Spherical Astronomy. I; cr. to be arranged. Apparent motion of the celestial sphere. Astronomical coordinates and their transformations. Parallax, refraction, time, use of the ephemeris.

14. Practical Astronomy. II; cr. to be arranged. Theory and use of the sextant, theodolite, transit, and equatorial telescope.

For Undergraduates and Graduates

116. Celestial Mechanics. Yr.; cr. to be arranged. Theory of undisturbed motion. Computation of ephemerides. Orbits of double stars and comets. Prerequisites: mathematics (courses in trigonometry, analytic geometry, and calculus); Astronomy 1.

122. Method of Least Squares. I or II; 2 cr. The theory, with application to numerical computation. Prerequisites: mathematics (courses in higher algebra, analytic geometry, and calculus); at least one course in either geodesy or observational astronomy.

For Graduates

225. Research. Graduate students desiring to pursue advanced astronomical studies or research may have access to the instruments and library of the Washburn Observatory upon showing that they are qualified to profit by such opportunity.

BIOLOGY

Study in the biological sciences is conducted in the independent, though coordinated, Departments of Botany, Zoology, Anatomy, Physiology and Physiological Chemistry, Experimental Breeding, Pathology and Medical Bacteriology, Pharmacology and Toxicology, Plant Pathology, and Agricultural Bacteriology.

1. **General Biology.** Yr.; 5 cr. An elementary one-year course in general biology may be taken by combining Botany 1 (first semester) and Zoology 1b (second semester), which see. Introductory to botany, zoology, anatomy, bacteriology, and physiology, and a prerequisite for all advanced work in these departments.

BOTANY

PROFESSORS ALLEN (chairman), OVERTON; ASSISTANT PROFESSORS BARTHOLOMEW, DENNISTON, GILBERT; CURATOR DAVIS; INSTRUCTORS BAIRD, BENNETT, BRYAN, SMITH, STEIL; ASSISTANTS ARMSTRONG, BARKER, BARTHOLOMEW, BROWN, DICKSON, FREY, GUGLER, HARVEY, MILLER, RICHARDS, SMITH, TOOLE. FELLOW, MR. BROWNING.

Major in Botany

For a major in Botany, a minimum of thirty credits is required; this should include, besides the thesis, one of the following groups of courses or their equivalents:

- a. Biology 1 (Botany 1 and Zoology 1b), and courses 103, 104, 105, and 106; or
- b. Biology 1, Botany 2, and two morphological courses (selected from courses 103, 104, 105, and 106).

For Undergraduates

1. **General Botany.** I or II; 5 cr. Preliminary to all advanced work. Accepted with Zoology 1b to make up an elementary course in general biology. Mr. Allen, Mr. Gilbert, and staff.
2. **Advanced General Botany.** II; 5 cr. A continuation of course 1 for those who wish a year course in general botany. Ac-

cepted as part of a teacher's minor or, with course 1, in satisfaction of the requirement of a year of natural science. Prerequisite: course 1 or its equivalent. Mr. Bryan, Mr. Baird, and staff.

32. Pharmacognosy. Yr.; 2 cr. Required of all students in Pharmacy. Mr. Denniston.

35. Sources and Collection of Crude Drugs. I; 1 cr. Required of first-year students in Pharmacy. Mr. Denniston.

90. The Teaching of Botany. II; 2 cr. Mr. Gilbert.

Senior Thesis. Yr.; 2 cr. A subject should be selected, whenever possible, before the close of the junior year.

For Undergraduates and Graduates

103. Morphology of Algae. I; 2 cr. The development of the different series and their relationships. Prerequisite: course 1 or its equivalent. Mr. Smith.

104. Morphology of Fungi. I; 3 cr. Parallel to course 103. Types of the various groups. Prerequisite: course 1 or its equivalent. Mr. Gilbert.

105. Morphology of Bryophytes and Pteridophytes. II; 2 cr. Types of mosses, ferns, and related plants. Prerequisite: course 1 or its equivalent. Mr. Allen, Mr. Steil.

106. Morphology of Seed Plants. II; 3 cr. The life history of a few types of gymnosperms and angiosperms. Prerequisite: course 1 or its equivalent. Mr. Smith.

***110. Plant Histology.** I; 3 or 4 cr. The tissues of seed plants and ferns; use of reagents and stains, section cutting and mounting. Prerequisite: course 1 or its equivalent. Mr. Denniston, Mr. Toole, Mrs. Bartholomew.

111. Microscopical Examination of Drugs and Foods. II; 3 cr. Prerequisite: course 110. Mr. Denniston, Mrs. Smith.

***115. Histology of Woods.** I; 2 cr. Mr. Denniston.

122. Advanced Morphology and Classification. Cr. to be arranged. Special work on algae, bryophytes, or pteridophytes. Prerequisite: adequate preparation in the morphology of the group studied.

129. Classification of Cultivated Plants. I; 2 cr. The structure and relationships of the common crop plants and weeds. Mr. Bartholomew, Mr. Baird, Mr. Armstrong.

130. Identification and Classification of Seed Plants. II; 4 cr. The floral structures of types of seed plants, with especial

*See also Forest Products Laboratory for other lectures on wood structure.

attention to those of economic importance. Practice in the use of a systematic key. Mr. Denniston, Mr. Baird.

131. Dendrology. II; 2 cr. The structure and characteristics of forest trees. Lectures, laboratory, and field work. Prerequisite: course 1 or its equivalent. Mr. Denniston.

133. Microscopy of Drugs. I; 3 cr. Prerequisite: course 110. Mr. Denniston.

146. Plant Physiology. II; 4 cr. The special physiology of seed plants. Prerequisite: course 1 or its equivalent, and a knowledge of physics and chemistry. Mr. Overton, Mr. Bartholomew, and staff.

147. Advanced Plant Physiology. II; 4 cr. Prerequisite: course 146 or its equivalent, and a knowledge of physics and chemistry. Mr. Overton, Mr. Bartholomew.

150. Cytology. Yr.; 5 cr. The structure, growth, reproduction, and irritability of the cell. Prerequisite: courses 103 to 106, or their equivalents. Mr. Allen, Mr. Smith.

154. Evolution and Inheritance in Plants. I; 2 cr. The evolution of sex, special features of fertilization in angiosperms, fundamental principles of plant breeding. Prerequisite: course 1 or its equivalent. Mr. Bryan.

156. Facts and Theories of Heredity. II; 2 cr. Prerequisite: course 1 or its equivalent. Mr. Allen.

For Graduates

214. Seminary in General Botany. Yr. Subject for 1916-17, the history of botany since 1840. Mr. Allen.

215. Seminary in Plant Physiology. Yr. Mr. Overton, Mr. Bartholomew.

216. Research. Yr. Investigation may be undertaken in any department of botany in which the student's preparation is adequate.

220. Advanced Mycology. Yr. The morphology and classification of the fungi. Prerequisite: course 104 or its equivalent. Mr. Gilbert.

221. Classification of Parasitic Fungi. Yr. Field and laboratory work. Prerequisite: the equivalent of Botany 104 or of Plant Pathology 101. Mr. Davis.

248. Physiology of the Fungi. I. With special reference to parasites which cause diseases of plants. Prerequisite: course 146 or its equivalent, and a knowledge of physics and chemistry. Mr. Bennett.

252. Cytology of the Fungi. II. Prerequisite: courses 104 and 150, or their equivalents. Mr. Gilbert.

CHEMISTRY

PROFESSORS FISCHER, KAHLENBERG (chairman), KREMERS, LENHER; ASSOCIATE PROFESSOR WALTON; ASSISTANT PROFESSORS CARLETON, KRAUSKOPF, MATHEWS, MILLER; INSTRUCTORS BARNEBEY, ELLINGSON, JONES, KOENIG, LANGENHAN, NEBEL, SCHUETTE, WAKEMAN; ASSISTANTS BENDER, BISHOP, BOHNSON, BOSWORTH, BRANN, CLEMENS, JOHNSON, MORRIS, NOER, RITTER, ROESELER, SCHIERZ, SEVRINGHAUS, SHAW, TRAUTMANN, WATERHOUSE, WILLIAMSON.

FELLOW, MR. HAGEMAN; SCHOLAR, MR. MERRILL.

For an undergraduate major in Chemistry are required in addition to a thesis, at least 20 credits consisting of course 1, one semester of course 11, and one semester of course 120.

For Undergraduates

1. **General Chemistry.** 5 cr. First semester, nonmetals; second semester, metals and qualitative analysis. Mr. Kahlenberg, Mr. Walton, Mr. Krauskopf, and staff.

2. **General Chemistry.** Yr.; 3 cr. For freshmen in Engineering. Mr. Kahlenberg, Mr. Walton, Mr. Krauskopf, and staff.

5. **The Teaching of Chemistry.** II; 2 cr. Prerequisites: Chemistry 1; 120, first semester; credit or enrollment for five credits in Chemistry 11. Mr. Walton.

11. **Quantitative Analysis.** Yr.; 3 to 5 cr. Prerequisite: Chemistry 1. Mr. Lenher, Mr. Barnebey, Mr. Carleton, and staff.

11Ag. **Quantitative Analysis.** I; 2½ cr. For agricultural students. Mr. Carleton and staff.

20. **Organic Chemistry.** I; 2 cr. class; ½ to 2 cr. lab. Prerequisite: Chemistry 1. Mr. Fischer and staff.

26. **Inorganic Pharmaceutical Chemistry.** I; 4 cr. Required of students in Pharmacy. Prerequisite: courses 1, 11 and 117. Mr. Kremers, Miss Wakeman.

27. **Organic Pharmaceutical Chemistry.** II; 5 cr. Prerequisite: course 120. Required of students in Pharmacy. Mr. Kremers, Miss Wakeman.

45. **Alkaloid Assay.** II; 1 or more cr. One hour required of students in Pharmacy. Additional work may be elected upon consultation. Mr. Langenhan.

40. **Plant Chemistry.** 3 cr. Supplementary to Botany 132. Mr. Miller.

Senior Thesis. 2 cr.

For Undergraduates and Graduates

107. History of Chemistry. Yr.; 1 cr. A general survey of the early periods during the first semester, and of the quantitative period during the second semester. Mr. Kremers.

108. Advanced Qualitative Analysis. 2 or more cr. More complex substances; compounds containing rare elements. Prerequisite: course 1. Mr. Krauskopf.

112. Advanced Quantitative Analysis. A continuation of course 11. Mr. Lenher.

113. Water Analysis. I; 1 cr. Prerequisite: Chemistry 11. Mr. Schuette.

114. Gas Analysis. I; 1 cr. Prerequisite: Chemistry 11. Mr. Lenher, Mr. Schuette.

116. Industrial Organic Analysis. II; cr. to be arranged. Mr. Fischer, Mr. Schuette.

117. Chemical Preparations. Preparation of typical inorganic compounds. Mr. Lenher.

118. Iron and Steel Analysis. Analysis of the ores and metallurgical products of the iron industry. Mr. Lenher.

119. Proximate Organic Analysis. I; 3 cr. Prerequisites: Chemistry 11 and Chemistry 120. Mr. Schuette.

120. Organic Chemistry. 2 cr. class; 1 to 3 cr. lab. Prerequisite: Chemistry 1. First semester, aliphatic compounds; second semester, mainly aromatic compounds. Mr. Fischer and staff.

121. Advanced Organic Preparations. Cr. to be arranged. Mr. Fischer and staff.

125. Chemistry of Sugars and Starches. I; 2 to 5 cr. (Given 1917-18.) Mr. Fischer.

126. Chemistry of Coal-Tar Dyes. II; 2 to 5 cr. Mr. Fischer.

127. Chemotherapy. Cr. to be arranged. A study of the pharmaceutical aspects of the preparation of new synthetic organic remedies. Lectures and laboratory work. Miss Wakeman.

128. Chemistry of Organic Nitrogen Compounds. I; 2 cr. (Given 1916-17.) Mr. Fischer.

130. Physical Chemistry. I; 5 cr. Prerequisite: Chemistry 1. Mr. Kahlenberg, Mr. Mathews.

131. Electrochemistry. II; 2 or more cr. (Given 1916-17.) Mr. Mathews.

132. Thermal Chemistry. I; cr. to be arranged. (Given 1916-17.) Mr. Mathews.

133. Photochemistry. I; 2 or more cr. (Given 1916-17.) Mr. Mathews.

135. Chemistry of Solutions. II; 2 to 5 cr. (Given 1916-17.) Mr. Kahlenberg.

136. Relation of Physical Chemistry to other Sciences. II; 2 cr. (Given 1917-18.) Mr. Kahlenberg.

137. Colloids. II; 2 to 5 cr. (Given 1917-18.) Mr. Mathews.

146. Chemistry of Foods and their Adulterations. II; 5 cr. Prerequisites: One semester's work each in Chemistry 11 and 120. Mr. Fischer, Mr. Schuette.

For Graduates

222. Research in Organic Chemistry. Mr. Fischer or Mr. Kremers.

224. Advanced Organic Chemistry. Hours to be arranged. Mr. Kremers.

234. Chemical Equilibrium. I; 1 cr. 1917-18: The phase rule; 1918-19: Chemical dynamics. Mr. Walton.

235. Advanced Physical Chemistry. Hours to be arranged. Mr. Mathews.

236. Advanced Electrochemistry. The preparation of chemical compounds by means of electrolysis. Mr. Kahlenberg, Mr. Mathews.

237. Research in General or Physical Chemistry. Especially designed for graduates seeking higher degrees. Mr. Kahlenberg, Mr. Mathews, Mr. Walton.

238. Chemical Seminary. 1 cr. Original articles of importance in the different fields of chemistry will be studied in detail.

241. Advanced Plant Chemistry. Mr. Kremers.

242. Research. Special reference to the chemistry of foods and alkaloids. Mr. Fischer.

243. Research. Volatile oils or other subjects of organic chemistry, with special reference to plant chemistry. Mr. Kremers.

251. Advanced Inorganic Chemistry. 2 cr. Modern theories. Lectures alternate with Chemistry 255. (Given in 1917-18.) Mr. Lenher.

252. Inorganic Preparations. Prerequisite for research in inorganic chemistry. Mr. Lenher.

253. Research in Inorganic Chemistry. Mr. Lenher.

255. Advanced Inorganic Analysis. 2 cr. Lectures; alternates with Chemistry 251. (Given 1916-17.) Mr. Lenher.

COMPARATIVE LITERATURE

COMMITTEE IN CHARGE: PROFESSORS OLSON, SHOWERMAN; ASSOCIATE PROFESSORS CERF, KIND; ASSISTANT PROFESSOR DODGE (chairman).

The courses in Comparative Literature are designed to meet two main needs: (1) That of undergraduates who have not the command of foreign languages necessary to the fundamental study of international types, movements or relations in literature, but who may wish to secure a general understanding of some of the more important of these. (2) That of graduate students, sufficiently equipped with foreign languages, who may wish to supplement their work in particular literatures with detailed study of special inter-relations. If graduate students wish to elect courses that are conducted largely in translation, they should understand that, in these, graduate credit is given only when the work in at least one of the foreign languages involved is done in that language.

There is no undergraduate major in Comparative Literature, but various courses on the list count toward a major in one or other of the language departments.

Graduate students who are working toward a doctor's degree in one of the language departments may take a first or second minor in Comparative Literature. The degree of Master of Arts may also be taken in this field. All candidates for either degree who wish credit in Comparative Literature should consult the chairman, since each case requires a special arrangement of studies. Courses not on this list are frequently accepted or required.

For Undergraduates

1. **Ancient Classical Epic.** I; 2 cr. Homer's *Iliad* and *Odyssey* and Virgil's *Aeneid*, in translation. Alternates with Greek 113. (Omitted 1917-18.) Mr. C. F. Smith.

3. **Ancient Classical Drama.** I or II; 3 cr. The Greek and Roman dramatists; their influence on the modern drama. In translation. (Given 1917-18.) Mr. Showerman.

50. **Masterpieces of Romance Literatures in Translation.** Yr.; 2 cr. Mr. Cerf.

For Undergraduates and Graduates

102. Renaissance Epic. II; 2 cr. *Orlando Furioso, Jerusalem Delivered, The Faery Queen, and Paradise Lost.* The first two in translation. (Omitted 1917-18.) Mr. Dodge.

107. Contemporary Drama. Yr.; 2 cr. Foreign plays in translation. (Given 1917-18.) Mr. Pyre.

108. The Contemporary Novel. Yr.; 2 cr. Foreign novels in translation. (Omitted 1917-18.) Mr. Campbell.

110. German Influences in England during the Nineteenth Century. Yr.; 2 cr. (Omitted 1917-18.) Mr. Leonard.

115. Elizabethan Prose Fiction in its Relations with that of the Continent. I; 2 cr. (Omitted 1917-18.) Mr. Dodge.

138. Shakspeare in Germany. Yr.; 2 cr. Shakspeare's influence on German literature during the eighteenth century and on the Romantic School. Counts for the German major. Alternates with course 242. (Omitted 1917-18.) Mr. Kind.

141. Principles and Practice of Translating. II; 1 or 2 cr. For students with advanced training in German, French, or Italian. Counts for the German major. Mr. Morgan.

146. The Ballad. I; 2 cr. The English and Scottish popular ballads, with their analogues in popular ballad and tale. Counts for the English major. Mr. Beatty.

159. Germanic Mythology and Heroic Legends. II; 2 cr. Counts for the German major. (Omitted 1917-18.) Mr. Roedder.

For Graduates

233. The German Classical Novel and its Forerunners in Germany, France, and England. Yr.; 2 cr. (Given 1917-18.) Mr. Feise.

250. The Renaissance in Romance Countries. Yr.; 2 cr. First semester, Italian; second semester, French. (Given 1917-18.) Mr. Cerf.

242. The Literary Relations of England and Germany in the Eighteenth Century. Yr.; 2 cr. Alternates with course 138. (Given 1917-18.) Mr. Kind.

244. The Medieval Drama. Yr.; 2 cr. First semester, liturgical drama; second semester, English. (Omitted 1917-18.) Mr. Young.

248. Medieval Literature. Its beginnings in Europe with special reference to the influence of the French and Provençal literatures. (Omitted 1917-18.) Mr. Reed.

252. Medieval French Drama. Yr.; 2 cr. Origins; relation to the early religious plays of other countries. (Omitted 1917-18.) Mr. Smith.

254. French Romanticism in its International Relations. Yr.; 2 cr. (Given 1916-17.) Mr. Cerf.

EDUCATION

PROFESSORS HENMON (chairman), O'SHEA; ACTING PROFESSOR HILL (1916-17); ASSISTANT PROFESSORS MILLER, T. LLOYD JONES, STARCH, SEYBOLT; INSTRUCTOR HOYT; ASSISTANTS CHILDS, FINNER, SMITHEY.

FELLOW, MR. VAN LANDEGEND.

The chief aim of this department is to treat the history, foundations, and practices of education in the spirit of contemporary thought. To this end courses are offered in each of the following groups: (1) History of education; (2) Principles of education and mental development in the child and in the race; (3) Educational psychology; (4) Organization, administration, and supervision of education; (5) Educational practice under supervision.

Seminary and research courses in each of the main divisions of Education are offered.

Students below the junior class are not admitted to any course in Education except upon the written permission of the instructor in charge. This permission will be granted only to mature students and to students properly prepared who are under the necessity of leaving the University, before graduation, to enter teaching.

Courses 1, 6, 11, 41, and A, are regarded as elementary, and as introductory to the advanced courses given in the department. Excepting courses A and 1, these courses are not open for election by graduates of normal schools.

Major in Education

Undergraduate students selecting education as a major subject are required to obtain credit in approved courses amounting to twenty-two hours, inclusive of credit for thesis. Graduate students selecting Education as a major will be expected to show familiarity with the general aspects of each of the divisions of Education before they will be admitted to candidacy for either a master's or a doctor's degree.

Master's Degree—Summer Session and in Absentia Work

Candidates for the degree of Master of Arts or the degree of Master of Philosophy, fulfilling the requirements therefor by study during summer sessions and *in absentia* work, and presenting Education as a major subject, must comply with the following special requirements: (1) All such candidates will be accepted provisionally during the first summer session. The duration and special conditions of their candidacy will be determined on the basis of fitness and qualifications exhibited in the courses taken during this first summer session; (2) Candidates who have not already satisfactorily completed courses in psychology and education, equivalent to the existing requirements for the University Teachers Certificate, will be required to devote at least four summer sessions, together with *in absentia* work in fulfillment of the requirements for the master's degree. This will apply in particular to persons who are graduates of the so-called minor colleges; (3) The amount of *in absentia* work to be accomplished must be equivalent to at least one semester of university study. For persons with usual preparation and qualifications, this will require from twelve to fifteen hours of study and investigation weekly throughout each of the two years. During the first year attention will be given to a course of reading preparatory to the preliminary written examination required. The second year will be devoted to the preparation of a thesis; (4) Before taking the oral examination required for all second degrees at the close of the period of summer session and *in absentia* study each candidate must undergo a preliminary written examination in each of the principal divisions of Education, viz.: I. History of Education; II. Principles of Education and Mental Development; III. Educational Psychology; IV. Organization, Administration, and Supervision of Educational Systems.

This preliminary written examination must be taken before June first of the third summer session. Students may take the examination in two parts. Arrangements will be made whereby the examination may be taken at the student's home town.

University Teachers Certificate

The requirements for the University Teachers Certificate will be found on pp. 250-265.

For Undergraduates

A. Educational Practice. I or II; 2 cr. Directed teaching based upon participation in the activities of the Wisconsin High School. Open only to seniors and graduate students qualifying for the University Teachers Certificate. Mr. Miller.

1. History of Modern Education. I or II; 2 or 3 cr. Mr. Seybolt.

6. Public Education. I or II; 2 or 3 cr. Survey and interpretation of the American educational system. Mr. Hill.

11. Mental Development. I or II; 2 or 3 cr. General principles; intellectual, emotional, motor development; mental economy and hygiene. Mr. O'Shea.

41. Educational Psychology. I or II; 2 or 3 cr. Prerequisite: psychology (Philosophy 1). Mr. Henmon, Mr. Starch.

For Undergraduates and Graduates

102. History of Ancient and Medieval Education. I; 2 or 3 cr. Prerequisite: Education 1, or equivalent. Mr. Seybolt.

103. History of American Education. II; 2 cr. Prerequisite: Education 1 or equivalent. Mr. Seybolt.

104. State School Systems. I; 2 or 3 cr. Prerequisites: Education 1 or 6, and one other elementary course in education. Mr. Hill.

105. Municipal School Systems. II; 2 or 3 cr. Prerequisites: Education 1 or 6, and one other elementary course in education. Mr. Hill.

112. Social Development and Education. I or II; 2 or 3 cr. Prerequisites: Any two elementary courses in education. Mr. O'Shea.

113. Principles of Education. II; 2 or 3 cr. Prerequisites: Any two elementary courses in education. Mr. O'Shea.

116. Educational Classics. I; 2 cr. Critical examination of sources from early Greek writers to the present time. Prerequisite: Education 1 or equivalent. Mr. Seybolt.

117. Educational Values. I; 3 cr. Prerequisites: Any two elementary courses in education. Not open to students who have completed course 113. Mr. O'Shea.

142. Experiments in Educational Psychology. I or II; 1 or 2 cr. Prerequisites: Education 41 and one other elementary course in education. Mr. Starch.

144. Advanced Educational Psychology. Yr.; may be elected by semesters; 2 cr. First semester, individual differences, mental inheritance, and the correlation of mental abilities; second semester, original nature of man, psychology of learning, mental work and fatigue, mental hygiene. Prerequisites: Education 41 and one other elementary course in education. Mr. Henmon.

Vocational Education and Guidance. (See Manual Arts 113.) II; 2 cr. Mr. Crawshaw.

For Graduates

The following courses are open to graduate students and to normal school graduates of senior standing majoring in Education.

205. European School Systems. I; 2 cr. Germany, France, and England. Prerequisites: Education 6 and 104, or equivalents. Mr. Hill.

214. Genetic Psychology. Yr.; 2 cr. The psychology of development in respect to some of the principal types of educational work. Prerequisite: Education 11, 41 and 142, or equivalents. Mr. O'Shea.

216. Contemporary Educational Movements. I; 2 cr. Prerequisite: Education 103, or equivalent. Mr. Seybolt.

218. History of Modern European Education. II; 2 cr. Prerequisites: Education 103, or equivalent. Mr. Seybolt.

220. Seminary in Education. Yr.; 1 or 2 cr. Prerequisites: Education 11, 41 and 142, or equivalents. Mr. O'Shea.

231. Seminary in Administration and Supervision of Education. Yr.; 1 or 2 cr. Prerequisite: Education 104 or 105, or equivalent. Mr. Hill.

233. Supervision of Instruction. I; 2 or 3 cr. Open only to those with practical teaching experience. Mr. Hill.

234. Educational Hygiene. II; 2 cr. Modern practice with regard to the main divisions of educational hygiene. There will be intensive studies of selected topics with emphasis on administrative problems. Prerequisites: Education 104, or 105, or equivalent. Mr. Hill.

244. Mental Tests. Yr.; 2 cr. Prerequisites: Education 41 and 142, or equivalents. Mr. Starch.

246. Experimental Education. I; 2 cr. Prerequisites: Education 41 and 142, or equivalents. Mr. Henmon.

248. Seminary in Educational Psychology. Yr.; 1 or 2 cr. Prerequisites: Education 41 and 142, or equivalents. Mr. Henmon, Mr. Starch.

ENGLISH

PROFESSORS HUBBARD, YOUNG (chairman); ASSOCIATE PROFESSORS LATHROP, PYRE; ASSISTANT PROFESSORS BEATTY, CAIRNS, CAMPBELL, O. J., DODGE, GARDNER, LEONARD, MANCHESTER, PENDLETON, ROE, TAYLOR; INSTRUCTORS ALDERMAN, BONNELL, BURD, CAMPBELL, L. B., CARR, CHASE, DEMOSS, DOOLEY, EMSLEY, FILES, HARKNESS, HAWKINS, JOHNSON, MITCHELL, SCALLON, TRUEBLOOD, VERRILL, WANN; ASSISTANTS CALKINS, HIBBARD, KITCHEL, SCHWEPPE, SPEICHER.

General Statement

The courses of the department are intended to serve five main purposes: (1) to train students in the use of English as a means of expression and communication for the ordinary demands of social, commercial, and professional life; (2) to continue that training to suit the special needs of those who intend to take up journalistic or literary work; (3) to develop the literary sympathy and appreciation and to extend the knowledge of those who find in English and American literature the readiest means of obtaining the advantages of a liberal education; (4) to prepare teachers of English for school and college work; (5) to fit students for and assist them in scholarly investigation. Most of the courses will be found to meet all of these ends, directly or indirectly, but some are specially directed to one or two in particular. Every student is encouraged to select the courses most suited to his or her own needs, but certain courses are prescribed as necessary for due equipment in particular lines of work.

Undergraduate Courses

All students in the Colleges of Letters and Science, Engineering, and Agriculture are required to take Freshman English (course 1 or its equivalent). The General Survey (course 30) is prerequisite to the other literature courses, and is also recommended for students who desire a general knowledge of English literature, but are unable to carry their study of the subject further.

Students taking English as an elective course outside the major study are advised to select courses mainly from the undergraduate group. Those who make English their major study, after providing for the required courses, may choose at will from this or the following group (for undergraduates and graduates).

Senior Honors in English

Candidates for senior honors in English have a choice between two courses of reading:

(a) Chaucer: *Troilus and Criseyde*.

(b) The Complete Works (including Letters, Journals, etc.) of Lord Byron; Thomas Carlyle: *The French Revolution*; the Works of Sir Thomas Browne.

Candidates who choose (a) will be expected to render at sight normal passages of the text assigned and to answer such questions of metrical, linguistic, and historical significance as might reasonably be dealt with in a brief critical introduction.

Candidates who choose (b) will be expected to show that they possess a sound general knowledge of the substance of the works assigned and such information concerning the history and significance of each as may be necessary to a general understanding of its place in English literature.

Candidates in either course will be tested at the close of the year by a three-hour written examination.

English as a Major Study

Students intending to choose English as their major study are strongly recommended to take General Survey (30) in their sophomore year.

At the beginning of the year in which they decide upon their major subject they should consult the head of the department, who will assign them to an adviser. They are required to take twenty-four credits as a minimum, exclusive of the thesis and of course 1 (required of all students). The twenty-four credits must include course 30 (6 credits) and one course from each of the following groups: (a) 36 or 137; (b) 34, 35, or 40; (c) 31, 157, 158, 159, or 160.

Candidates for the degree of Ph. B. choosing English as their major subject are required to fulfill the same conditions as obtain for the B. A. degree.

For Teachers

The requirements for the teachers certificate for those electing English as their major or minor will be found on p. 257.

Library Work

Students who take the joint course arranged at the University and the State Library School may find it to their advantage to choose English as their major study. Of the twenty hours of library work for which credit is given by the University four may be counted towards an English major if the candidate so desires, reducing the minimum departmental requirement to thirty credits. In addition to courses 1 and 30, which are required of all, library students are recommended to select courses of a more general character from the group primarily for undergraduates, especially 34, 35, 36 or 137, 39, 40. For detailed information in regard to preparation for library work, see Index under Library Training and a special bulletin entitled, "Courses in Library Training."

The M. A. Degree

Candidates for the degree of Master of Arts who intend to take one-half or more of their work in English should consult the chairman of the department as to the courses most suitable to their purpose. They are required to show that they have had sufficient preliminary training in English language and literature to undertake graduate work, or to complete such preliminary training in addition to the graduate work required; if they have not taken an undergraduate course in the English language, they will be required to take at least three hours in that subject, but this requirement may be satisfied by an adequate training in Greek and Latin. They are expected to take at least two unit-hours each semester from the courses restricted to graduates.

M. A. in Absentia

The advanced study required for the M. A. *in absentia* in this department consists of two graduate courses taken in each of three consecutive summer sessions, with work done in continuation of one of the two courses each year. Particulars may be obtained from Professor Arthur Beatty, secretary of the Department.

The Doctor's Degree

Special requirements for the doctor's degree (English major) are:

1. The general history of English literature.
2. Anglo-Saxon and Middle English.

3. Special knowledge of the particular field chosen for study.
4. Reasonable acquaintance with the political and social history of that period.
5. Auxiliary studies, varying according to the particular field chosen. For example: for the sixteenth century, Latin, Italian, German, and French; for the classical period, Latin and French; for the romantic period, and for the nineteenth century, French and German.
6. A thesis and examination as explained above.

RHETORIC AND COMPOSITION

For Undergraduates

A. English Composition. For students who have failed to pass the test prescribed on page 95. Three hours a week; no undergraduate credit. Miss Wales and staff.

1a. Freshman English. I or II; 3 cr. Required of freshmen in the Colleges of Agriculture and Engineering and of freshmen in the College of Letters and Science who do not take English 12a (see below). Mr. Manchester and staff.

1b. Freshman English. I or II; 3 cr. Continuation of 1a. Required of freshmen in the Colleges of Agriculture and Engineering and of freshmen in the College of Letters and Science who do not take English 12b (see below). On the completion of this course, a provisional pass mark is given; if subsequently a student is reported deficient or careless in English composition, he may be required to take additional work in that subject. Mr. Manchester and staff.

12a. Freshman Rhetoric. I; 5 cr. Required of those freshmen looking forward to the degree Ph. B., General Course, who do not take foreign language in their freshman year. Mr. Lathrop.

12b. Freshman Rhetoric. II; 5 cr. Continuation of 12a; required of the same category of students. English 12a and 12b offer a discipline in composition equivalent to that given in English 1a and 1b, in addition to a study of selected prose works. On the completion of course 12b a provisional pass mark is given; if subsequently a student is reported deficient or careless in English composition, he may be required to take additional work in that subject. Mr. Lathrop.

2. Sophomore Composition. Yr.; 2 cr. Open to students who have passed English 1b or 12b. Mr. Taylor and staff.

3a. Argumentation. I; 3 cr. Lectures, textbook, practice exercises. Prerequisite: English 1b or 12b. Mr. O'Neill.

3b. Argumentative Addresses. II; 2 cr. Continuation of 3a. Mr. O'Neill.

4. Commercial Correspondence. II; 2 cr. Taken for credit only by students in a technical course, and by seniors preparing to teach the subject. Mr. Gardner and staff.

11. Advanced Commercial Composition. I; 2 cr. Prerequisite: good work in English 4. Taken for credit only as part of a technical course. Mr. Gardner.

5. Junior Composition. Yr.; 2 cr. Prerequisite: a grade of 85 or over in English 1b or 12b, or credit in English 2. Mr. Harkness.

6. Advanced Composition. Yr.; 3 cr. Elective for juniors and seniors. Mr. Dodge.

107. Narration. Yr.; 2 cr. Open to juniors and seniors who have taken one composition course in advance of English 1b or 12b. Mr. Cairns.

108. Dramatic Writing. Yr.; 2 cr. As a prerequisite to admission, candidates are expected to submit an acceptable scenario. Early conference with the instructor is desirable. (Omitted 1917-18.)

9. Technical Composition. II; 3 cr. The composition of technical papers. Elective for juniors and seniors in Engineering who have had English 1b. Mr. Burd.

For Graduates

217. The Teaching of Freshman English. II; 2 cr. (Omitted 1917-18.) Mr. Lathrop.

ENGLISH LANGUAGE AND LITERATURE

For Undergraduates

25. The English Language. I; 3 cr. The development of the English language. Open to sophomores, juniors, and seniors. Mr. Hubbard.

30. General Survey. Yr.; 3 cr. (1) Lectures on the history of English literature to the end of the nineteenth century; (2) study in small tutorial groups of the works of representative authors. Prerequisite to all courses in English literature; required of sophomores taking English as their major, and recommended to students

desiring a single course in English literature. Mr. Campbell, Mr. Pyre (chairman of conference), Mr. Roe, Mr. Young, and staff.

31. **Chaucer.** II; 3 cr. Mr. Beatty.

32. **The Study of Literature.** Yr.; 3 cr. The chief aim of this course is to increase the student's power of literary enjoyment and assimilation. With this end in view, selected masterpieces are studied in detail, together with a limited amount of the theory of literary criticism. Not counted toward the English major. Mr. Gardner.

34. **The Romantic Movement.** I; 3 cr. A summary review from Thomson to Blake; representative poetical works of Wordsworth, Coleridge, Byron, Shelley, and Keats. Mr. Campbell, Mr. Bonnell.

35. **The Victorian Era.** II; 3 cr. A continuation of 34. The works for particular study are those of Tennyson, Browning, Rossetti, Arnold, Morris, and Swinburne. Mr. Campbell, Mr. Bonnell.

36. **Elizabethan Drama.** Yr.; 3 cr. The English drama from the beginning to the year 1642. Mr. Pyre.

38. **Prose Style.** Yr.; 2 cr. English prose from Dryden to the present day. Mr. Taylor.

39. **The Novel.** Yr.; 2 cr. Principles of prose fiction; the English novel from Defoe to George Eliot. Mr. Lathrop.

40. **American Literature.** Yr.; 2 cr. The course should be preceded or accompanied by English 30. Mr. Cairns, Mr. Harkness.

48. **The Literary Aspects of the English Bible.** I; 3 cr. Mr. Lathrop.

50a. **The Teaching of English.** I; 2 cr. The work of the first and second years in high school, with special emphasis on the teaching of composition. Mr. Pendleton.

50b. **The Teaching of English.** II; 2 cr. The work of the third and fourth years, with special emphasis on the teaching of literature. Mr. Pendleton.

Observation of teaching is required in each course. 50a and 50b are required of all candidates for the teachers certificate (English major); an advanced composition course (to be taken in the sophomore or junior year) and 50a are required of all candidates for the minor teachers certificate in English.

54. **Carlyle and Ruskin.** I; 2 cr. Mr. Roe.

55. **Emerson and Arnold.** II; 2 cr. Mr. Roe.

For Undergraduates and Graduates

The insertion of CL after a course number indicates that the course belongs also to Comparative Literature.

107CL. Contemporary Drama. Yr.; 2 cr. Tendencies in European drama. Plays not English in translation. Mr. Pyre.

108CL. The Contemporary Novel. Yr.; 2 cr. Recent developments in the European novel. Foreign novels in translation. (Omitted 1917-18.) Mr. Campbell.

110CL. German Influences in England during the Nineteenth Century. Yr.; 2 cr. (Omitted 1917-18.) Mr. Leonard.

102CL. Renaissance Epic. II; 2 cr. *Orlando Furioso*, *Jerusalem Delivered*, *The Faery Queen*, and *Paradise Lost*. Mr. Dodge.

115CL. Elizabethan Prose Fiction. I; 2 cr. (Omitted 1917-18.) Mr. Dodge.

120a. Anglo-Saxon. I; 3 cr. Mr. Hubbard, Miss Carr.

120b. Middle English. II; 3 cr. A continuation of course 120a. Miss Carr.

121. Anglo-Saxon Poetry. I; 3 cr. Especial attention is given to the lyric and epic poems least affected by Christianity. (Omitted 1917-18.)

122. Beowulf. II; 3 cr. Open to seniors. Mr. Hubbard.

123. Modern English Grammar. II; 2 cr. The facts of modern English grammar, viewed in the light of the history of the language, and of the general principles of linguistic science. Mr. Hubbard.

137. Shakspeare. Yr.; 3 cr. Elizabethan political, social, and literary conditions; a study of selected plays. Mr. Young, Mr. Manchester.

141. Tennyson. II; 2 cr. Mr. Beatty.

142. Versification. II; 2 cr. Mr. Pyre.

143. English Essayists. II; 2 cr. From Bacon to the present day. Mr. Dodge.

144. Wordsworth. I; 3 cr. Mr. Beatty.

145. Browning. I; 2 cr. Mr. Pyre.

146CL. The Ballad. I; 2 cr. English and Scottish popular ballads; analogues in popular ballad and tale. Mr. Beatty.

149a. Studies in the Chief American Poets. I; 2 cr. (Omitted 1917-18.) Mr. Cairns.

149b. Studies in the Chief American Essayists. II; 2 cr. (Omitted 1917-18.) Mr. Cairns.

153. Philosophy in the English Poets. Yr.; 2 cr. From Wordsworth to Meredith. Mr. Leonard.

156. Literary Criticism. I; 2 cr. From Samuel Johnson to Matthew Arnold. Mr. Lathrop.

157. Milton. I; 2 cr. Mr. Dodge.

158. The Age of Dryden. I; 3 cr. (Omitted 1917-18.) Mr. Lathrop.

159. The Age of Pope. II; 3 cr. (Omitted 1917-18.) Mr. Lathrop.

160. The Sixteenth Century. I; 3 cr. Non-dramatic literature in poetry and prose from Sir Thomas More to Bacon. Mr. Dodge.

161. Rhetoric. II; 2 or 3 cr. The history of the subject; modern theory. Mr. Lathrop.

For Graduates

224. English Philology Seminary. Yr.; 2 cr. Subject for 1916-17, Anglo-Saxon Poetry; subject for 1917-18, Piers Plowman. Mr. Hubbard.

231. Introductory Seminary in English Literature. Yr.; 2 cr. Subject for 1916-17, Shakspeare. Mr. Young. Subject for 1917-18, Browning. Mr. Hubbard.

232. Introductory Seminary in English Literature. Yr.; 2 cr. Subject for 1916-17, Milton. (Omitted 1917-18.) Mr. Dodge.

244. Seminary in English Literature. Yr.; 2 cr. Subject for 1917-18, Chaucer. Mr. Young.

247. Seminary in American Literature. Yr.; 2 cr. Subject for 1917-18, Emerson (first semester), Whitman (second semester). Mr. Cairns.

FINE ARTS

PROFESSOR SHOWERMAN.

1. The Fine Arts. I; 3 cr. In alternate years. Illustrated general survey of architecture, sculpture, and painting from classical antiquity to the Renaissance.

FORESTRY*

LECTURER TIEMANN.

For Undergraduates

1. Forestry and Utilization of Wood. I; 2 cr.

For further information see separate circular No. 761. Also pages 297, 445.

GEOLOGY

PROFESSORS LEITH (chairman), WHITBECK, WINCHELL; ASSOCIATE PROFESSORS MARTIN, TWENHOFEL; ASSISTANT PROFESSORS BEAN, FINCH, MEAD, STEIDTMANN, WILLIAMS; ASSISTANTS DAVIS, LOFT; CURATOR THWAITES.

FELLOW, MR. MERRITT.

Course 1, General Geology, is the introductory course for all students not taking physiography and geography as a major. Students whose preparation does not include both physics and chemistry may enter only by special arrangement with the instructor.

Students entering courses in Mineralogy as a training in science should have a general knowledge of chemistry, at least equivalent to that derived from a high school course. No other preliminary courses are required.

Courses 101 to 199 are advanced courses, adapted for students who have had at least one full year in the Department of Geology and for graduates.

For major in Physiography and Geography (a) 23 or 24 credits in the Department of Geology, (b) either 2 credits in meteorology or 3 credits in astronomy, and (c) a thesis in geography (4 credits), are required, making 30 credits in all. In addition, part or all of 10 credits more are desirable, preferably made up from the geographical courses listed under Geology and such courses as Meteorology 1, 2, 106; Astronomy 1; Political Science 19; Agricultural Economics

*No professional forestry training is offered.

1; Soils 125; History 111 and 148; Hydraulic Engineering 110; Topographic Engineering 1, 106, and 109.

The requirements in geography in connection with the University Course for the Training of Teachers are stated on page 263.

For Undergraduates

1. **General Geology.** Yr.; 5 or 3 cr. First semester, principles of geology; second semester, historical and applied geology, including field study of the geology of an area near Madison. Prerequisites: see above. Students desiring a short course in geology may take the first semester of this course (3 or 5 cr.) or course 2, without prerequisites, second semester. Mr. Twenhofel.

2. **Short Course in Geology.** II; 3 cr. Mr. Steidtmann.

3. **Laboratory Course in Geography.** Yr.; 2 cr. Part of Geology 4. Prerequisite: Geology 1 or 5C. Mr. Martin and staff.

4. **Physiography and Geography.** Yr.; 5 cr. The lands, the atmosphere, and the oceans, illustrated by regional studies of physiographic provinces of the United States, and by a review of the regions of the world. No prerequisites. Mr. Martin and staff.

5C. **Physical and Economic Geography.** Yr.; 3 cr. First semester, physical geography; second semester, economic geography. For students in the Course in Commerce except by special permission. Mr. Whitbeck and staff.

6. **General Mineralogy.** Yr.; 5 cr. Elementary crystallography, physical, chemical, and determinative mineralogy with blow-pipe work. Mr. Winchell, Mr. Steidtmann.

7. **Short Course in Mineralogy.** I; 3 cr. Mr. Steidtmann.

8. **Short Course in Petrology.** I; 3 cr. Mr. Steidtmann.

For Undergraduates and Graduates

101. **Geography of Europe.** I; 2 cr. (Given 1917-18 and in alternate years.) Mr. Martin.

102. **Geography of South America.** II; 2 cr. Mr. Whitbeck.

103. **Geography of North America.** I; 3 cr. (Given 1916-17 and in alternate years.) Mr. Williams.

104. **Geography of Wisconsin.** II; 3 cr. Mr. Bean.

106. **Agricultural Geography.** II; 3 cr. Mr. Finch.

107. **Influence of Geography on American History.** I; 3 cr. (Given 1917-18 and in alternate years.) Mr. Williams.

108. **Petrology.** Yr.; 5 cr. The theory of the polarizing microscope; microscopic study of the important minerals and rocks. Prerequisite: course 6. Mr. Winchell.

130. Glaciers and Glaciation. I; 2 cr. Special illustrations from Alaska and Wisconsin. Prerequisite: Geology 1, 4, or 5C. (Given 1916-17 and in alternate years.) Followed by second semester course on Advanced Glacial Geology in years when elected by ten students. Mr. Martin.

109. Advanced Physiography. Yr.; 2 cr. Origin of land forms, with particular emphasis on the work of rivers. Prerequisite: Geology 1, 4, or 5C. Mr. Martin.

110. The Teaching of High School Geography. Yr.; 2 cr. First semester, teaching of physical geography; second semester, teaching of commercial geography. First semester not prerequisite to second semester. Prerequisite: Geology 4. Mr. Whitbeck.

111. Economic Geology. Alternates with Geology 115. Yr.; 3 cr. (Given 1916-17 and in alternate years.) Excursions are taken to iron, copper, lead, and zinc districts. Prerequisites: Chemistry 1, Geology 6 or 7, and Geology 1. Mr. Leith, Mr. Mead.

112. Stratigraphy. II; 5 cr. The larger facts of the earth's history and the principles involved in its interpretation. Fossils are studied as indices of time and geography. (Given 1917-18.) Prerequisites: Geology 1 and 121. Mr. Twenhofel.

113. Oceanography. II; 2 cr. Prerequisite: Geology 1, 4, or 5C. (Given 1917-18 and in alternate years.) Mr. Martin.

114. Structural Geology. I; (a) Lectures, 2 cr. Mr. Leith; (b) Map interpretation and laboratory work, 3 cr. Mr. Mead. The two parts are closely related but may be taken independently.

115. Metamorphic Geology. Yr.; 3 cr. A general survey of the field of metamorphism, emphasizing its quantitative treatment. (Given 1917-18 and in alternate years.) Mr. Leith, Mr. Mead.

140. Economic Geology Laboratory. Quantitative study of the processes of ore deposits to be taken with course 111. Mr. Mead.

141. Metamorphic Laboratory. Quantitative study of metamorphism, to be taken with course 115. Mr. Mead.

117. Principles of Pre-Cambrian Geology. II; 2 cr. Alternates with course 118. (Given 1917-18 and in alternate years.) Mr. Leith.

118. Lake Superior Geology. II; 2 cr. The Lake Superior region is treated as illustrative of principles of pre-Cambrian, structural, metamorphic, and economic geology. At the close of the course in the spring, an excursion is made to points of geologic and economic interest in the Lake Superior country. (Given 1916-17 and in alternate years.) Mr. Leith, Mr. Mead.

119. Petrology of Lake Superior Rocks. Yr.; 3 cr. Prerequisite: course 108. (Given 1916-17 and in alternate years.) Mr. Winchell.

120. Advanced Mineralogy. Prerequisite: course 6. Mr. Winchell.

121. Paleontology. I; 5 cr. The structure, classification and evolution of extinct organisms. Mr. Twenhofel.

122. Research. The amount of time allotted is subject to special arrangement.

123. Oil Geology. II; 2 cr. Prerequisite: Geology 1. (Given 1917-18 and in alternate years.) Mr. Leith, Mr. Mead.

125. Field Work for Advanced Students. II; 3 cr. Two or three weeks in May are spent in geologic mapping of some selected area in iron or copper districts of Lake Superior or zinc district of Wisconsin. (Given in alternate years with course 118.) Mr. Leith, Mr. Mead.

126. Maps for Geographic Teaching. I; 2 cr. Mr. Finch.

127. Advanced Economic Geography. I; 3 cr. For intending teachers and advanced students. Prerequisite: course 4, or 5C. Mr. Whitbeck.

128. Lake Superior Iron Ore Exploration. II; 2 cr. Applied geology. Prerequisites: Descriptive Geometry and course 114, 117, or 118. (Given 1917-18 and in alternate years.) Mr. Mead.

129. Petrogeny. Yr.; 1 to 3 cr. Phenomena of magmas; the origin of derived rocks. Prerequisite: course 108. (Given 1917-18 and in alternate years.) Mr. Winchell.

131. Summer Field Course in Physiography and Geology. 4 to 6 cr. During August, 4 weeks. Limited to 15 students (men). Not given for less than 12 students. Field study in the Baraboo district near Devil's Lake, Wisconsin, border of glaciated area and driftless area, drumlins and kettle moraines, older and later drift. Cost, including living expenses and tuition, \$55 to \$65. Mr. Martin, Mr. Whitbeck, or Mr. Williams.

132. Geographical Seminary. 2 cr. Mr. Whitbeck or Mr. Martin.

133. Sedimentation. I; 3 cr. Mr. Twenhofel.

134. Regional Geology. II; 3 cr. (Omitted 1917-18.) Mr. Twenhofel.

135. History of the Development of Geology. I; 2 cr. Prerequisite: course 1 or 4. (Given 1917-18 and alternate years.) Mr. Twenhofel.

180. Geologic Seminary. A weekly conference of all advanced and major students in geology.

For Graduates

See graduate catalogue for grouping of courses for graduate work.

GERMAN

PROFESSORS HOHLFELD (chairman), VOSS; ASSOCIATE PROFESSORS FEISE, GOODNIGHT, KIND (secretary), ROEDDER; ASSISTANT PROFESSORS BRUNS, DEIHL, ERNST, HAERTEL, KELLER, MORGAN, STERLING; INSTRUCTORS ARON, CAST, ESSINGER, GREUBEL, HAUSSMANN, HOLLANDER, LUSSKY; ASSISTANTS DEXTER, GIESSING, HENNING, MARTIN, SAXER, SCHAUERMANN.

FELLOW, MR. ROBERTS.

The courses in German are organized as follows:

I. The elementary courses represent the work normally done in the first and second year classes, and are so graded as to meet the needs of high school graduates with different degrees of preparation. Students without previous work in German enter course 1a; those who have had one year of high school German enter course 1b, those who have had two years of high school German enter course 2a, and those who have taken three years of German in the high school enter course 2b. Freshmen with four years of high school German are not allowed to enter any of these elementary courses. They should take course 14, if they enter in the first semester, and course 3, if they enter in the second semester, provided they are able to devote *four hours* per week to German. Otherwise they may make two or three hour programs by electing from courses: 15, 17, 18, 20, 40 and 41. Students whose general course of study requires a special class in German should elect classes like 3Sc, 3C or 16. Students who possess a thorough, practical knowledge of German considerably in advance of what their high school work indicates, should present themselves for an informal examination with a view to being assigned to more advanced classes. Credit for the omitted lower work will, however, be granted only in exceptional cases, regulated by special rules of the Faculty, and never without a formal examination.

II. The advanced practice courses differ much in character and grade of work, but have this in common, that they do not deal chiefly with literature, but are intended for specific practical ends, definitely stated in each case. None of these courses is required of students wishing to study German solely for its literature. Such students, after completing course 2b, should select their work from Group A, though some of the work in composition and conversation may be advisable in connection with their literary courses.

III. The literary courses are of very different degrees of advancement, those from 233 to 248 not being open to undergraduate students. The less advanced courses are divided into two groups designated A and B. Ordinarily students may not enter Group B unless they have taken at least one course in Group A, or its equivalent. Elections from these groups, therefore, are subject to certain restrictions stated below, before courses 3 and 21. Ordinarily, about twelve credits in Groups A and B will be adequate preparation for the more advanced work in literature, as well as for the more elementary courses in philology. Students intending to specialize in German literature are advised to do related work in English literature, in medieval and modern history, and in philosophy. They should also pursue, to a fair degree of advancement, the study of at least one other foreign language and literature, ancient or modern. Their attention is also called to the courses mentioned under "Comparative Literature."

IV. The courses from 150 to 159CL, and from 260 to 270 are devoted to work in German philology. While most of these courses are intended for graduate students working for a higher degree in German, some of them are well suited to the needs of advanced undergraduates. This is especially true of courses 150 and 151, which are required of all students expecting to teach German as their major subject, but also of courses 114b, 152, and 159CL, all of which are so conducted as to be of direct benefit to properly qualified seniors.

Major in German*

Students beginning the study of German in the University with course 1a will find it difficult to prepare to teach German as their major subject, unless they show special aptitude for the work. Students taking courses 2a and 2b in their freshman year will have to devote to German at least eight to ten credits a year for the remaining three years, taking thus, including the thesis, a total of at least twenty-four credits in advance of course 2b. Not less than

eight of these credits should represent class work in advance of course 100. This amount represents a minimum which will rarely prove sufficient in the case of those preparing to teach German as their major subject. Teaching candidates are required to take the following courses: 10 or 112, 114a and 114b, 130 or 131, 150 and 151.

As to the maximum number of credits which students may elect in German, the following rules apply in accordance with the general statement under "electives." Students beginning their university work in German 1a, 1b, or 2a may take up to forty-six credits, those entering 2b up to forty-three credits, those entering higher classes may not exceed forty credits.

Minor in German*

Students preparing to teach some other subject as their major, with German as their minor, will be required to complete courses 10 or 112, 92 (for one or two credits), and at least four credits from courses 21 to 28, 130 or 131.

Germanistische Gesellschaft

The Germanistische Gesellschaft is an organization of students and instructors interested in the study of the German language and literature and of German life and culture. There are two general meetings each month, on Wednesday evenings, the programs consisting of lectures, recitations, dramatic performances, singing, and social entertainments. All students specializing in German, preparing to teach German, or wishing to keep up their knowledge of German, are urged to become members of the Gesellschaft and to attend regularly these general meetings which are also open to all interested members of the University and residents of the city.

Aside from these general meetings, there are semimonthly meetings of the Scientific Section (*Wissenschaftliche Abteilung*). These are open to the graduate students of the department and are devoted to reports on original investigations, current publications, and pedagogical problems.

*Students who are preparing to teach German as their major or minor subject and have done a considerable amount of work elsewhere or have had successful teaching experience may be excused, by action of the department, from some of the required work. Such excuse will be granted only on the basis of an examination and in no case will students be recommended by the department unless they have taken at least four credits of work in the department.

German House

Under the auspices of the Germanistische Gesellschaft a German House was established for the Summer Session of 1914. This has become a permanent institution for the academic year as well as for the summer session. Rooms for women students only; board for both men and women. Information will gladly be furnished by Miss Anna Essinger, German House, 501 N. Henry St., Madison, Wis.

ELEMENTARY COURSES

Mr. Kind is in general charge of courses 1a-2b.
Mr. Haertel is in special charge of the sections arranged
for students in Agriculture and Engineering.

For Undergraduates

- 1a. **Beginners' German.** I or II; 4 cr.
- 1b. **Second Semester German.** I or II; 4 cr. Continuation of course 1a. Prerequisite: course 1a, or one year of high school German.
- 2a. **Third Semester German.** I or II; 4 cr. Modern prose; grammar review. Prerequisite: course 1b, or two years of high school German.
- 2b. **Fourth Semester German.** I or II; 4 cr. Continuation of course 2a; a classical drama; selected lyrics. Prerequisite: course 2a, or three years of high school German. Students completing course 2b in the first semester should elect course 3 in the second semester. (See introductory remarks, paragraph I.)

Special sections of courses 1a to 2b are arranged for students in Agriculture, Engineering, and natural sciences.
For instructors, hours, and rooms of the various sections, see Time Table.

ADVANCED PRACTICE COURSES**For Undergraduates**

Mr. Morgan is in general charge of courses 6 and 10, 40, 41 and 42.
Mr. Hausmann is in general charge of courses 3C, 4C, and 5C.

- 3Sc. **Scientific German.** Yr.; 2 cr. For students specializing in science. Prerequisite: course 2b. Miss Sterling, Mr. Hollander.
- 3C. **Commercial German.** Yr.; 2 cr. For sophomores in the Course in Commerce. Prerequisite: course 2b. Mr. Greubel.

4C. Commercial German. Yr.; 2 cr. For juniors in the Course in Commerce. Continuation of course 3C. Prerequisite: course 3C, or equivalent. Mr. Haussmann.

5C. Commercial German. Yr.; 2 cr. For seniors in the Course in Commerce. Continuation of course 4C. Prerequisite: course 4C, or equivalent. (Omitted 1916-17.) Mr. Haussmann.

6. Grammar and Composition. Yr.; 1 cr. Prerequisite: course 2b. Miss Sterling.

16. Modern Prose. Yr.; 2 cr. Rapid reading in history, biography, and description. Suitable in preparation for the language examination for the doctor's degree. Prerequisite: course 2b. Mr. Hollander.

40. Elementary Conversation. Yr.; 1 cr. (2 hrs.) Class practice, with work at home not to exceed one hour per week. Prerequisite: course 2b. Mr. Morgan, Miss Sterling, Mr. Cast, Miss Essinger, Mr. Hollander.

41. Intermediate Conversation. Yr.; 1 cr. (2 hrs.) Class practice, with work at home not to exceed one hour per week. Prerequisite: four credits in advance of course 2b, or sufficient ability in speaking German. Mr. Bruns.

42. Major Course in Conversation. Yr.; 2 cr. (4 hrs.) For students preparing to teach German, but deficient in the oral use of the language. Mr. Aron.

Courses 6, 40, and 41 may be taken only in connection with some other course in the department, except by special permission. Students registering for work in conversation should consult Mr. Morgan as to the course to be selected.

8. German Pronunciation and Expressive Reading. II; 1 cr. (2 hrs.) Open, after consultation, to students of fair advancement in German. Not open to freshmen. (Omitted 1916-17.) Mr. Feise.

10. Composition and Conversation. Yr.; 2 cr. Prerequisite: four credits in advance of course 2b. Mr. Bruns, Mr. Morgan, Mr. Aron, Mr. Hollander, Mr. Lussky.

11. Journalistic German. Yr.; 1 cr. (2 hrs.) Mr. Haertel.

13. Grammar Review. II; 2 cr. For seniors preparing to teach German. Discussion of theoretical grammar from the standpoint of the high school teacher. Mr. Lussky.

92. Teachers Course for Minors. I; 2 cr. (3 hrs.) (a) Conversation, grammar, phonetics; 1 cr. (2 hrs.) (b) Methods and organization of a two-year course; 1 cr. (1 hr.) For seniors. Mr. Deihl.

For Undergraduates and Graduates

112. Advanced Practice in Speaking and Writing German. Yr.; 2 cr. For advanced students specializing in German. More advanced than course 10, though ordinarily students should take only one of the two courses. Mr. Feise.

114a. Teachers Course for Majors. I; 2 cr. Methods. For seniors and graduates. Mr. Deihl.

114b. Teachers Course for Majors. II; 2 cr. Phonetics. For seniors and graduates. Mr. Aron.

GERMAN LITERATURE**For Undergraduates**

Mr. Kind is in general charge of Groups A and B.

GROUP A

These courses are primarily intended for students who have had course 2b, or its equivalent. Students having had more than four credits in advance of course 2b will be required to do additional work to receive full credit.

Not more than two of the courses in this group may regularly be taken for credit.

3. Selected Masterpieces. II; 4 cr. Prerequisite: course 2b, or four years of high school German. Mr. Feise, Miss Essinger, Mr. Schauermann.

14. Advanced Freshman German. Yr.; 4 cr. Classical and modern writers. Open only to freshmen who enter the University in the first semester with four years of high school German. (See course 3.) Mr. Keller.

15. Classical and Modern Writers. Yr.; 3 cr. Required of sophomores who intend to specialize in German. Not open to students who have had course 3 or 14. Mr. Aron, Miss Essinger, Mr. Lussky.

17. Modern German Drama. Yr.; 3 cr. A rapid reading course. Mr. Cast.

18. Modern German Novel. Yr.; 3 cr. A rapid reading course. (Omitted 1916-17.) Mr. Haussmann.

20. Schiller. Yr.; 2 cr. Introductory study of his life; *Die Braut von Messina*, *Wallenstein*. Mr. Roedder, Mr. Haertel.

To make suitable four or five-hour courses, 15, 17, and 18 should be combined with 6, 40, 41, 42, 16, or 20.

Course 20 is given in English, 3, 14, and 15 in German, 17 and 18 partly in German.

GROUP B

These courses are primarily intended for juniors specializing in German, but are open to all others who have had at least six credits in advance of course 2b.

Not more than 12 credits may regularly be taken in this group for full credit.

21. **Wagner's Music Dramas.** I; 3 cr. **German Poetry.** II; 3 cr. (Omitted 1916-17.) Miss Sterling.

22. **Heine.** I; 3 cr. **Hobbel.** II; 3 cr. Mr. Bruns.

23. **Goethe's Earlier Dramas.** Yr.; 2 cr. Alternates with course 24. (Given 1917-18.) Mr. Voss.

24. **Lessing's Dramas.** Yr.; 2 cr. Alternates with course 23. (Given 1916-17.) Mr. Voss.

25. **Goethe's Prose Works.** Yr.; 2 cr. Novels and autobiography. Alternates with course 27. (Omitted 1916-17.) Mr. Feise.

26. **Modern Fiction.** Yr.; 3 cr. Keller, Storm, Meyer, Raabe, Mr. Goodnight.

27. **Contemporary Drama.** Yr.; 2 cr. Alternates with course 25. (Given 1917-18.) Mr. Feise.

28. **Kleist.** I; 2 cr. **Grillparzer.** II; 2 cr. Mr. Kind.

29. **Survey of German Painting and Sculpture of the Nineteenth Century.** I; 1 cr. (2 hrs.) Illustrated lectures. Not open to freshmen; does not count towards a major or minor in German. Knowledge of German not required. (Given 1916-17.) Miss Sterling.

30. **Germany and its Institutions.** II; 1 or 2 cr. (2 hrs.) Lectures (partly illustrated). Counts towards minimum requirement for a major, or towards the language requirement, only if taken for two credits. Mr. Haertel.

Courses 21 and 30 are given in English, the others partly in German.

100. **Thesis Course.** Yr.; 2 cr. In conformity with the faculty regulations concerning thesis courses (see requirements for degrees), the following were offered in 1916-17:

i. **Goethe's Prose Works.** Mr. Feise.

ii. **Goethe's Dramas.** Mr. Keller.

For Undergraduates and Graduates

Mr. Hohlfeld is in general charge of Courses 130-141CL, 233-249.

130. **Goethe's Faust.** Yr.; 3 cr. Both parts of *Faust*, selected lyrics, and letters. Alternates with course 131. (Given 1916-17.) Mr. Hohlfeld, Mr. Keller.

131. Survey of German Literature. Alternates with course 130. (Given 1917-18.) Mr. Hohlfeld, Mr. Keller.

132. Lessing. I; 2 cr. Life and Works. (Omitted 1916-17.) Mr. Morgan.

134. Lyric Poetry of the Nineteenth Century. Yr.; 2 cr. Alternates with course 241. (Omitted 1916-17.) Mr. Bruns.

135. The Novel of the Nineteenth Century. Yr.; 2 cr. (Omitted 1916-17.) Mr. Goodnight.

136. Popular German Literature. Yr.; 2 cr. First semester, *Volkslied*, *Märchenliteratur*, and *Volksbücher*; second semester, modern dialect literature. Alternates with course 137. (Given 1916-17.) Mr. Roedder.

137. Schiller. Yr.; 2 cr. Dramatic works, philosophical writings, and correspondence. Alternates with course 136. (Given 1917-18.) Mr. Roedder.

138CL. Shakspeare in Germany. Yr.; 2 cr. Alternates with course 242CL. (Omitted 1916-17.) Mr. Kind.

139. German Versification. I; 2 cr. (Omitted 1916-17.) Mr. Feise.

140. Modern German Drama since 1870. Yr.; 2 cr. Contemporary movements in France, Scandinavia, and Russia. (Given 1916-17.) Mr. Feise.

141CL. Principles and Practice of Translating. II; 1 or 2 cr. For students with advanced training in German, French, or Italian. (Omitted 1916-17.) Mr. Morgan.

Courses 132, 138CL, and 141CL are given in English, 130 and 131 partly in German, the others in German.

For Graduates

233. The Classical Novel and Its Forerunners. Yr.; 2 cr. (Omitted 1916-17.) Mr. Feise.

241. The Romantic School in Germany. Yr.; 2 cr. Alternates with course 134. (Given first semester 1916-17.) Mr. Bruns.

242CL. The Literary Relations of England and Germany in the Eighteenth Century. Yr.; 2 cr. Alternates with course 138CL. (Omitted 1916-17.) Mr. Kind.

244. Middle High German Literature. Yr.; 2 cr. Literary movements; German life and culture. Prerequisite: course 152, or its equivalent. (Omitted 1916-17.) Mr. Morgan.

245. Hebbel. II; 2 cr. His life and works, his position in the modern drama, and his *Weltanschauung*. (Given 1916-17.) Mr. Bruns.

247. Pro-seminary in German Literature. Yr.; 2 cr. The drama in theory and practice to the time of Lessing. In alternate years in the following subjects:

A. The seventeenth and first half of the eighteenth century. (Given 1916-17.)

B. The classical period of the eighteenth century. (Given 1917-18.) Mr. Hohlfeld.

249. Bibliography and Methods. Yr.; 1 cr. A systematic discussion of the materials and aims of the study of German literature. May be combined with course 247, or taken separately by special permission. Mr. Hohlfeld.

248. Seminary in German Literature. Yr.; 2 cr. The general fields from which specific problems are chosen for investigation form a cycle of three years:

A. Interrelations of German and English literature, chiefly during the last three centuries. (Given 1915-16.)

B. First semester, Goethe; second semester, Goethe's *Faust*. (Given 1916-17.)

C. The German drama of the eighteenth and nineteenth centuries. (Given 1917-18.) Mr. Hohlfeld.

Courses 242CL, 243, and 244 are given in English, the others are given in German.

GERMAN PHILOLOGY

Mr. Voss is in general charge of courses 150-150CL, 260-270.

For Undergraduates and Graduates

150. History of the German Language. I; 2 cr. Mr. Voss.

151. Elementary Middle High German. II; 2 cr. Mr. Voss.

152. Advanced Middle High German. Yr.; 2 cr. The fields of study form a cycle of three years:

A. First semester, Walther von der Vogelweide; second semester, *Kudrun* and *Dietrichepen*. (Given 1916-17.)

B. First semester, Hartmann von Aue; second semester, early Middle High German. (Given 1917-18.)

C. First semester, Wolfram von Eschenbach and Gottfried von Strassburg; second semester, selected epics of the later Middle High German period. (Given 1915-16.) Mr. Voss.

114b. Phonetics. II; 2 cr. See p. 156. Mr. Aron.

154. Gothic. II; 2 cr. Alternates with course 155. (Given 1916-17.) Mr. Roedder.

155. Old High German. I; 2 cr. Alternates with course 154. (Given 1916-17.) Mr. Roedder.

158. Old Saxon. II; 2 cr. Alternates with course 159CL. (Given 1917-18.) Mr. Roedder.

159CL. Germanic Mythology and Heroic Legends. II; 2 cr. Alternates with course 158. (Omitted 1916-17.) Mr. Roedder.

Courses 114b, 150 and 151 are given partly in German and partly in English, and the others in German.

For Graduates

260. Classical German Philological Literature. Yr.; 1 cr. Alternates with course 261. (Omitted 1916-17.) Mr. Voss.

261. Historical German Grammar. Yr.; 1 cr. Alternates with course 260. (Given 1917-18.) Mr. Voss.

263. Pre-Germanic Grammar. Yr.; 2 cr. First semester, Germanic phonology; second semester, Germanic morphology and syntax. (Given 1917-18.) Mr. Aron.

264. Modern and Middle Low German. Yr.; 1 cr. *Reinke de Vos* and Fritz Reuter's prose writings. (Given 1916-17.) Mr. Voss.

265. Language and Literature of the Sixteenth Century. Yr.; 2 cr. History and development of the Modern High German literary language. Alternates with course 266. (Given 1916-17.) Mr. Voss.

266. Language and Literature of the Fourteenth and Fifteenth Centuries. Yr.; 2 cr. Alternates with course 265. (Given 1917-18.) Mr. Voss.

269. Pro-seminary in German Philology. Yr.; 1 cr. In alternate years in the following subjects:

A. First semester, Old High German poetry; second semester, Old High German prose. (Given 1917-18.)

B. First semester, Gothic; second semester, Old High German. (Given second semester, 1916-17.) Mr. Roedder.

270. Philological Seminary. Yr.; 2 cr. The fields of investigation form a cycle of three years:

A. Gottfried von Strassburg. (Given 1916-17.)

B. Wolfram von Eschenbach. (Given 1917-18.)

C. Hartmann von Aue. (Given 1915-16.) Mr. Voss.

Courses 260-270 are given in German.

GREEK

Emeritus PROFESSOR KERR; PROFESSORS SHOWERMAN, SMITH (chairman); ASSOCIATE PROFESSORS FISKE, LAIRD; FELLOWS SANDERS, CRAFTS.

The requirements for an undergraduate major in Greek are, in addition to the thesis, a minimum of twenty-two semester hours, not including courses 5a, 5b and 7.

LANGUAGE AND LITERATURE

For Undergraduates

5a, 5b. Elementary Greek. Yr.; 4 cr. White's *First Greek Book*, Xenophon's *Anabasis*. Mr. Laird.

5a. Elementary Greek. II; 4 cr. White's *First Greek Book*. Mr. Laird.

7. Second Year Greek. Yr.; 3 cr. Xenophon's *Anabasis* III-IV, Homer's *Iliad* I-III; Greek composition. Prerequisite: course 5a, 5b or equivalent. Mr. Smith.

10. Third Year Greek. Yr.; 3-cr. Herodotus VIII, Plato's *Apology*, Homer's *Odyssey* V-XII. Prerequisite: course 7 or equivalent. Mr. Laird.

11. Prose Composition and Sight-Reading. Yr.; 2 cr. Mr. Smith.

20. Fourth Year Greek. Yr.; 3 cr. Demosthenes' *Philippics*, Thucydides VII, Euripides, two or more plays. Prerequisite: course 10 or equivalent. Mr. Smith.

21. Prose Composition. Yr.; 1 cr. Prerequisite: course 11. Required of those who expect to teach Greek. Mr. Laird.

24. Easy Greek for Sight-Reading. Yr.; 1 cr. Prerequisite: course 10. Mr. Smith.

For Undergraduates and Graduates

105a. Greek Lyric Poets. I; 3 cr. Mr. Smith.

105b. Thucydides; Demosthenes. II; 3 cr. Mr. Smith.

106. Greek Dramatic Poets. Yr.; 3 cr. Aeschylus, Sophocles, Aristophanes (two plays of each); Aristotle's *Poetics*. Mr. Smith.

108. Plato. Yr.; 2 cr. *The Republic*. Mr. Laird.

110. Advanced Composition. Yr.; 1 cr. Mr. Laird.

112. Life of the Romans. Yr.; 3 cr. Lectures with lantern slides. A knowledge of Greek and Latin is not essential. Mr. Showerman.

***113. Greek Literature in English Translations.** I; 2 cr. Homer. A knowledge of Greek is not required. Mr. Smith.

113b. Greek Literature in English Translations. II; 2 cr. Drama. A knowledge of Greek is not required. Mr. Smith.

114. The Role of the Greeks in Civilization. Yr.; 1 cr. Lectures. A knowledge of Greek is not required. Mr. Smith.

122. Greek Art. I; 3 cr. See Fine Arts I. Mr. Showerman.

For Graduates

220. Thucydides. Yr. The works, read privately; seminary exercises mainly in text criticism. Mr. Smith.

221. Sophocles. Yr. The extant plays, read privately; seminary exercises in interpretation, metrical reading, etc. Mr. Smith.

222. Lyric Poetry. Yr. Especial attention is given to Pindar; the extant odes, read privately; seminary exercises in interpretation, metrical reading, etc. Mr. Smith.

223. Homer. Yr. Seminary exercises on the Homeric Question. Mr. Laird.

Courses 220-223 are given at intervals of years; 220 in 1915-16.

224. Greek Literature. Yr.; 2. Lectures and assigned readings in lyric poetry, drama, and history. Mr. Smith.

225. Greek Orators. Yr.; 2. Mr. Laird.

227. Greek Religion. I; 2. Mr. Fiske.

230. Greek Grammar. I; 3. Sounds and forms. Mr. Laird.

231. Greek Syntax. II; 3. Mr. Laird.

233. Journal Club. Mr. Smith.

*In alternate years this course is given also as Comparative Literature I, with the addition of Virgil's *Aeneid*.

HISTORY

PROFESSORS DENNIS, FISH, PAXSON, SELLERY (chairman), WESTERMANN; ASSOCIATE PROFESSORS CHASE, MATHEWS, ROOT; ASSISTANT PROFESSORS BYRNE, COFFIN,* SMITH; INSTRUCTOR CURTIS; ASSISTANTS CRAWFORD, KNAPLUND, MACDONALD, MURPHEY, RANEY, RICKER, WILDE.

FELLOWS, MR. BAUM, MR. COULTER; SCHOLARS, MR. BRIGGS, MISS WAKEMAN.

The courses in History are divided into three groups:

A. Introductory courses 1, 2, 4, 5, 6, and 10 are for undergraduates, and may not be counted toward advanced degrees in History. Courses 1, 5, 6, and 10 are the courses open to freshmen. Students may take only one of these freshman courses for full credit (three credits each semester) since each contains introductory training for which credit ought not to be given twice; but they may take others without the supplementary reading and topical report for two credits each semester. Students not registered in the College of Letters and Science may take any of the introductory courses for two credits each semester. Students are advised not to neglect advanced work in the attempt to cover all of the introductory courses.

B. Advanced courses 100 to 149 continue, in the direction of greater specialization, the work begun in the introductory courses. They may be elected by students who have the necessary preparation.

Courses 150 and 151 are primarily for students who expect to teach history in secondary schools. Seniors completing a major or a teaching minor in History will be regularly admitted to these courses. Other seniors and graduates will be admitted only by special permission.

C. Courses 252 to 262 are open only to graduate students.

The Major in History

Twenty-six credits in History, in addition to the thesis, are required for an undergraduate major in History and must include:

(a) One introductory course in European and one in American history;

(b) At least twelve credits in advanced courses.

*On leave of absence second semester, 1916-17.

The Master's Degree in History

Candidates for the master's degree in History who have completed an undergraduate major in History in this University, or its equivalent elsewhere, are required, in their year of work for the degree, to do one-half their work (*e. g.*, a three-hour lecture course and a seminary, both throughout the year), in advanced history, and to write an acceptable thesis. They are permitted to complete their programmes from advanced courses in history or related subjects. Other candidates for the master's degree in History will be required to concentrate their work more fully, or exclusively, upon history. Every candidate for this degree is expected to have had, as undergraduate or graduate, at least one advanced course in European and one in American history.

The Doctor's Degree in History

Candidates for the doctor's degree with major in History are required, *inter alia*, to possess a general knowledge of a broad field of history (ancient history, medieval history, modern history, English history, or American history) and an intimate knowledge of some more limited field, and to submit a scholarly dissertation within the limited field. The other requirements for the degree are given in the Graduate School Circular.

For Undergraduates

INTRODUCTORY COURSES OPEN TO FRESHMAN

Freshmen are permitted to choose two of the introductory courses 1, 5 or 6, and 10, for five credits, and are not required to do the special training work (including supplementary reading and topical report) in the second of the two courses.

10. Ancient History. Yr.; 2 or 3 cr. A general survey to the barbarian invasions. Mr. Westermann and staff.

1a, 1b. Medieval History. Yr.; 2 or 3 cr. Europe from the barbarian invasions to the close of the fifteenth century. Mr. Sellery, Mr. Chase and staff.

1a. Medieval History, 395-1095. II; 2 or 3 cr. Identical with the first semester of History 1. Mrs. Mathews and staff.

5. English History. Yr.; 2 or 3 cr. Outline of political and constitutional history, as a framework for the study of national, economic, and social development. Students who have had both

semesters of History 1 may enter this course at the beginning of the second semester. (Not open to students in the Course in Commerce.) Mr. Dennis, Mr. Smith and staff.

6. **English History.** Yr.; 3 cr. A survey of the history of England with emphasis on social and economic conditions. Open only to students in the Course in Commerce. Mr. Byrne and staff.

INTRODUCTORY COURSES NOT OPEN TO FRESHMAN

2. **Modern European History.** Yr.; 3 cr. From the close of the fifteenth century to the present day. May be elected by semesters. Mr. Curtis.

4. **History of the United States.** Yr.; 3 cr. A survey from the revolutionary era to the present, with emphasis upon political history. Prerequisite to all advanced courses in American history. May be elected by semesters. Seniors may elect for two credits. Mr. Fish.

For Undergraduates and Graduates

ANCIENT AND MEDIEVAL HISTORY

125. **Greek Civilization and its Expansion.** I; 2 cr. Mr. Westermann.

126. **The Roman Empire.** II; 2 cr. The Empire from the death of Julius Caesar to the era of Diocletian. (Omitted 1916-17.) Mr. Westermann.

123. **The Roman Empire in the East.** II; 2 cr. The eastern portion of the Empire from the founding of Constantinople to its capture by the Turks. Mr. Westermann.

129. **Greek and Roman Institutions.** I; 2 cr. To the end of the Roman Republic. (Omitted 1916-17.) Mr. Westermann.

131. **Medieval Civilization.** I; 3 cr. The intellectual life of the feudal period and the organization of society. Mr. Sellery.

133. **Medieval Commerce.** I; 2 cr. To the formation of the great trading companies. Mr. Byrne.

134. **The Renaissance.** II; 3 cr. The development of civilization in the period from Dante to Luther, conventionally known as the Renaissance. Mr. Sellery.

MODERN HISTORY

137. Modern Civilization. I; 3 cr. European institutional development from the Peace of Westphalia to the end of the nineteenth century. (Omitted 1916-17.) Mr. Coffin.

140. The Reformation. II; 3 cr. The Protestant Revolt and the Catholic Reformation. (Omitted 1916-17.) Mr. Sellery.

148. Expansion of Europe Since the Fifteenth Century. Yr.; cr. to be arranged. Mr. Dennis.

142. England Under the Tudors and Stuarts. Yr.; 2 cr. (Omitted 1916-17.) Mr. Dennis.

136. The British Empire, 1688-1815. I; 2 cr. (Omitted 1916-17.) Mr. Dennis.

143. The British Empire since 1815. Yr.; 2 cr. Mr. Dennis.

144. The Development of Modern Russia. I; 2 cr. (Omitted 1916-17.) Mr. Coffin.

145. The Development of Prussian Leadership in Germany, 1640-1900. I; 2 cr. Mr. Coffin.

146. History of Central Europe. Yr.; 2 cr. The development of Central Europe, treated as a single area, from the migrations to the present time. Mr. Curtis.

138. The French Revolution and the Napoleonic Empire, 1789-1815. I; 3 cr. Mr. Coffin.

139. The Nineteenth Century. I; 3 cr. Mr. Coffin.

AMERICAN HISTORY

116. English Colonies in America, 1583-1783. Yr.; 3 cr. may be elected by semesters. Mr. Root.

119. French and Spanish Colonies in America, 1492-1823. Yr.; 2 cr. Mr. Root.

113. History of New England. II; 2 cr. Transfer of population from Europe to New England; the forces, social, economic, political, that acted upon it there, and its expansion westward. (Omitted 1916-17.) Mr. Fish.

114. History of the South. Yr.; 3 cr. may be elected by semesters. (Not open to sophomores.) Mrs. Mathews.

111. History of the West, 1763-1890. Yr.; 3 cr. may be elected by semesters. Mr. Paxson.

112. Representative Men. I; 3 cr. A study of American leaders of thought and action. Those of each generation will be

grouped together, and their environment, problems, and achievements discussed. Mr. Fish.

115. **Diplomatic History of the United States.** Yr.; 2 cr. (Omitted 1916-17.) Mr. Fish.

120. **History of American Neutrality, 1783-1916.** II; 3 cr. Mr. Fish.

117. **Constitutional History of the United States, 1750-1850.** Yr.; 2 cr. Mr. Root.

118. **Civil War and Reconstruction.** I; 3 cr. (Omitted 1916-17.) Mr. Fish.

124. **Recent History of the United States, 1873-1917.** Yr.; 2 cr. may be elected by semesters. Mr. Paxson.

121. **Studies in Colonial History.** Yr.; 2 cr. (Omitted 1916-17.) Mr. Root.

150. **The Teaching of History in the High School.** I or II; 2 cr. Required of seniors for the teachers major; elective for the teachers minor. Mr. Chase.

151. **Supplementary Reading for Teachers of History.** II; 2 cr. Required for the teachers minor; elective for the teachers major. Mr. Chase.

For Graduates

252. **Historical Method.** Yr.; 2 cr. Graduate students in their first year are expected to take this course. Mr. Sellery, Mr. Fish, Mr. Westermann, Mr. Paxson, Mr. C. L. Jones.

254. **Seminary in Ancient History.** Yr.; 2 cr. First semester, organization and administration of Egypt under the Ptolemies; second semester, economic conditions under the Roman Empire. (Omitted 1916-17.) Mr. Westermann.

255. **Seminary in Latin and Ancient History.** Yr.; 2 cr. See Latin 233. The sources upon the principate of Augustus Caesar, especially the Monument of Ancyra. (Omitted 1916-17.) Mr. Slaughter, Mr. Westermann.

256. **Seminary in Medieval History.** Yr.; 2 cr. Pierre Dubois. A knowledge of Latin, French, and German is required. Mr. Sellery.

257. **Seminary in Modern European History.** I; 2 cr. Material selected in the field of Napoleonic institutions. (Omitted 1916-17.) Mr. Coffin.

259. **Seminary in History of the British Empire.** Yr.; 2 cr. Modern economic and political history. Mr. Dennis.

261. Seminary in American History. Yr.; 2 cr. A study of the factors underlying some limited period of American history. Mr. Fish.

262. Seminary in American History. Yr.; 2 cr. The Hayes-Garfield-Arthur Administrations. Mr. Paxson.

INDO-EUROPEAN COMPARATIVE PHILOLOGY

ASSOCIATE PROFESSOR LAIRD (chairman), INSTRUCTOR ARON.

For Undergraduates and Graduates

101. Introduction to Comparative Philology. I; 2 cr. Mr. Aron.

102. Elements of Comparative Grammar. II; 2 cr. Mr. Aron.

103. Elementary Sanskrit. Yr.; 3 cr. Mr. Laird.

104. Advanced Sanskrit. Yr.; 1 cr. Mr. Laird.

105. Latin Grammar. Sounds and Forms. I; 3 cr. Mr. Laird.

106. Greek Grammar. Sounds and Forms. I; 3 cr. Mr. Laird.

For Graduates

207. Old Irish. I; 2 cr. Mr. Aron.

209. Pre-Germanic Grammar. Yr.; 2 cr. Mr. Aron.

210. Old Bulgarian. II; 2 cr. Mr. Aron.

JOURNALISM

PROFESSOR BLEYER (chairman), ASSISTANT PROFESSOR HYDE, INSTRUCTOR BING.

The courses in Journalism are designed to give the student instruction and practice in newspaper writing and editing, in some kinds of magazine writing, and in advertising, as well as to present present-day problems of journalism in the light of their origin and development. The department has a large laboratory equipped like the city room of a newspaper office, with typewriters, reference books, maps, a "morgue," and similar material. Adjoining this is a reading

room with current files of representative American newspapers and journalistic periodicals, and a lecture room equipped with a lantern for projecting slides and opaque objects. A large collection of foreign newspapers from various parts of the world furnishes material for the study of comparative journalism. A series of special lectures by editors and writers in active service is given annually for the students in journalism classes.

Besides the instruction given by the Department of Journalism, several other departments offer courses especially for journalism students. The Department of Political Science gives a course in the law of the press, including the law of copyright, libel, and similar topics. The Department of Manual Arts has special classes in drawing for students of journalism and advertising, which include cartooning, illustrating, sketching, and artistic printing. A course in French journalism is offered by the Romance Language Department, and a course in the reading of German newspapers is included in the German Department. The principles of advertising form the subject of a course in the Department of Philosophy, and newspaper advertising of one in the business administration section of the Department of Political Economy. Courses in commercial correspondence and the writing of advertising booklets given by the English Department, and classes in agricultural journalism and advertising in the College of Agriculture are open to students of journalism and advertising.

Major in Journalism

For an undergraduate major in Journalism are required, exclusive of a thesis, not less than 20 credits in which may be included, in addition to journalism courses, the course in the law of the press (Political Science 125), newspaper advertising (Political Economy 15), French journalism (French 18, 1 credit), and agricultural journalism.

Graduate Study

Provision is made for directing research of graduate students in historical and contemporary phases of newspapers and magazines, as well as for giving special training in any kind of journalistic work. The master's degree is granted in Journalism. University graduate scholarships are open annually to students in journalism.

For Undergraduates

1. **General Survey of Journalism.** Yr.; no cr. Required of freshmen in the Course in Journalism. Mr. Bleyer.
2. **Newspaper Reporting and Correspondence.** Yr.; 3 cr. Primarily for sophomores. Mr. Hyde.
3. **Newspaper Editing.** Yr.; 2 cr. Prerequisite: Journalism 2 or equivalent practical experience. Mr. Hyde.
7. **The Country Newspaper.** I; 2 cr. Open only to juniors and seniors. Mr. Bing.
8. **Technique of Printing.** II; 2 cr. Open only to juniors and seniors. Mr. Bing.
15. **Newspaper Advertising (Political Economy 15).** I; 2 cr. For juniors and seniors. Mr. Gardner.
11. **Journalistic German (German 11)** Yr.; 1 cr. Prerequisite: German 2 or equivalent. Mr. Haertel.
18. **French Journalism (French 18).** Yr.; 2 cr., 1 in French, 1 in journalism. Prerequisite: French 1a and 1b or equivalent. Mr. Ernst.
32. **Current Political Topics (Political Science 32).** I; 2 cr. Mr. Carpenter.
51. **Free Hand and Applied Drawing (Manual Arts 51).** Yr.; 3 cr. Special section for journalism students, with cartooning, illustrating, sketching, and artistic printing. Mr. Varnum.

For Undergraduates and Graduates

104. **Editorial Writing.** Yr.; 2 cr. Primarily for seniors and graduates. Mr. Bleyer.
105. **Special Feature and Magazine Writing.** Yr.; 2 cr. Mr. Bleyer.
110. **History and Principles of Journalism.** Yr.; 2 cr. Open only to seniors and graduates. Required for undergraduate and graduate major in journalism. Mr. Bleyer.
119. **Principles of Advertising (Philosophy 119).** II; 2 cr. Mr. Starch.
125. **The Law of the Press (Political Science 25).** II; 2 cr. Mr. Carpenter.

AGRICULTURAL JOURNALISM

1. **Agricultural Journalism.** I; 2 cr. Mr. Hopkins.
2. **Agricultural Advertising.** II; 2 cr. Mr. Hopkins.

LATIN

PROFESSORS SHOWERMAN, SLAUGHTER (chairman); ASSOCIATE PROFESSORS FISKE, LAIRD; ASSISTANT PROFESSORS ALLEN, SABIN; ASSISTANT BARNES.

FELLOW, MR. BRUNELLE.

The courses in Latin are divided into three groups:

I. Introductory courses (1-23) are for undergraduates and may not be counted for advanced degrees in Latin. 1 counts toward the bachelor's degree and the language requirement in the University, but will not be accepted as part of a Latin major.

II. 107-119 are open to students who have completed 6 and 7, or an equivalent, and may be counted toward the master's degree. 107 is required of all students who desire the University Teachers Certificate with Latin as a major.

III. 225-233 are for graduate students, but are not open to those who have completed less than twenty-four semester hours of undergraduate Latin.

Latin Major

The requirements for a major in Latin are twenty-four credits as a minimum. At least six credits, in addition to the thesis, should be chosen from courses 107 to 119, but no specific requirement of courses is made. Greek 20, 105a and 105b, and 106 to the extent of six credits, may be counted toward a Latin major. See page 260 for requirements for teachers certificate.

LANGUAGE AND LITERATURE

For Undergraduates

1. **Elementary Latin.** Yr.; 5 cr. The elements of Latin and Caesar's *Bellum Gallicum*, Bks. I-III. Mr. Barnes, Mr. Brunelle.

3. **Cicero and Virgil.** Yr.; 4 cr. An additional hour for those who desire prose composition. Miss Allen.

6. **Livy, Cicero, and Terence.** Yr.; 4 cr. Livy I and XXI; Cicero, *De Senectute*; Terence, *Phormio*. Miss Allen, Mr. Fiske, Mr. Showerman.

7. **Horace, Catullus, and Martial.** Yr.; 3 cr. Mr. Slaughter.

9. **Pliny's Letters and Tacitus' Agricola.** I; 2 cr. Emphasis upon the life of the period. Miss Allen.

10. Classical Mythology. I; 2 cr. Assigned readings in English. Lectures with lantern slides. Latin not essential. Miss Allen.

For Undergraduates and Graduates

107. Prose Composition. Yr.; 1 cr. An additional elective hour of lectures on syntax. Mr. Fiske.

108. Cicero's Letters and Orations. I; 3 cr. Emphasis on the personality of Cicero. Mr. Showerman.

109. Roman Drama. I; 3 cr. Plautus, Terence, and Seneca. Mr. Showerman.

110. Lucretius. II; 3 cr. *De Rerum Natura* I, III, and V. Mr. Slaughter.

111. Virgil. I; 3 cr. *Aeneid* VII-XII. Mr. Slaughter.

112. Rome and Roman Life. I; 3 cr. Lectures with lantern slides. Latin not essential. Mr. Showerman.

114. Roman Philosophy. II; 2 cr. Cicero and Seneca. Miss Allen.

116. The Teaching of Latin in Secondary Schools. Yr.; 2 cr. Miss Sabin.

118. Roman Satire. Yr.; 2 cr. Ennius, Lucilius, Varro, Horace, Seneca, Persius, Petronius, and Juvenal. Mr. Fiske.

119. Roman Historians to Tacitus. Yr.; 2 cr. Mr. Fiske.

122. Classical Art. See Fine Arts 1.

123. Roman Monuments. II; 2 cr. Lectures with lantern slides. Latin not essential. Mr. Showerman.

For Graduates

225. Latin Grammar. I; 3. The sounds and forms of the Latin language. Mr. Laird.

226. Latin Syntax. II; 3. Illustrative of the historical method. Mr. Laird.

227. Religion of the Greeks and Romans. Yr.; 2. Mr. Fiske.

228. Roman Archaeology. II; 3. 123 with an additional hour for reports. Latin essential. Mr. Showerman.

229. Palaeography and Epigraphy. Yr.; 2. Mr. Slaughter.

231. Latin Literature. Yr.; 3. Lectures and assigned readings. Miss Allen.

232. Literary Criticism. Yr.; 2. Based on the writings of Cicero, Horace, and Quintilian. Miss Allen.

233. Latin Seminary. Yr.; 2. In 1917-18 the subject will be the *Monumentum Ancyranum*. Mr. Slaughter, Mr. Westermann.

MANUAL ARTS

PROFESSORS CRAWSHAW (chairman), PHILLIPS; ASSISTANT PROFESSORS GODDARD, VARNUM; INSTRUCTORS ANDERSON, DIAMOND, NELSON, WILSON.

The Department of Manual Arts, in cooperation with allied departments, aims to reach three principal classes of students: first, those for whom the teaching of manual arts is a major subject; second, those who desire to make the teaching of some aspect of the work a minor; third, students for whom such courses as those announced may constitute part of a program of liberal study.

The department conducts courses in the several lines of shop work, drawing, and design taught in public high schools and in related matters such as organization and maintenance, history and literature, and supplies and equipment. The department is the center in the University for the study of vocational and industrial education. Cooperation with several allied departments is maintained.

Adequate facilities for all laboratory courses are made possible by the use of the full equipment of the College of Engineering shops, laboratories, and drawing rooms. In addition, the department has a large room fitted up especially for woodworking classes and for the study of supplies and equipment. Through the kindness of manufacturers a large number of exhibits are housed in this room and form an adequate museum of the manual arts. The room is both a laboratory and a lecture room with facilities for demonstration work and investigation. The Wisconsin High School through its Department of Manual Arts furnishes a laboratory for observation and directed teaching. University students specializing in manual arts act as assistant instructors in the high school department.

The Applied Arts Laboratory is conveniently equipped for lower grade construction work, design, and applied design in clay and art metals. A large and well lighted room on the first floor of the Biology Building is used for work in freehand drawing.

Courses announced, with usual privileges for minor and major work, are open to election by all students, subject to the general university and special college regulations governing elections.

The Major in Manual Arts

Courses listed below, except Nos. 1, 2, 50, and 51 may be elected in fulfillment of the requirements for an undergraduate major in manual arts. The minimum requirement for a major in manual arts is thirty credits, in addition to the thesis.

For Undergraduates

1. **Elements of Mechanical Drawing.** I or II; 3 cr. Mr. Phillips, Mr. Orth, Mr. Thomas, Mr. Grenoble, Mr. Markwardt.

2. **Elements of Mechanical Drawing.** I or II; 3 cr. Prerequisite: course 1. Mr. Phillips, Mr. Orth, Mr. Thomas, Mr. Grenoble, Mr. Markwardt.

*4. **Elementary Bench Woodwork.** I; 3 cr. Bench work appropriate for the upper grammar grades and the first year of high school. Laboratory problems suited to individual needs. Mr. Diamond, Mr. Crawshaw.

15. **Applied Design; Wood.** I or II; 3 cr. Woodworking from the Arts and Crafts standpoint. Mr. Diamond.

5. **Furniture and Cabinet Design and Construction. II; 3 cr. An advanced course. Prerequisite: course 4 or equivalent. Mr. Diamond, Mr. Crawshaw.

10. **Wood Finishing. II; 2 cr. Theory and practice of finishing interior woodwork and furniture. Mr. Diamond.

11. **The Installation and Care of Woodworking Machines.** I; 2 cr. Laboratory practice with lectures upon equipment, its manufacture, installation, etc. Mr. Diamond.

6. **Wood Turning.** I or II; 2 or 3 cr. The geometrical principles involved. Mr. Diamond, Mr. Chisholm.

16. **Elementary Pattern Making.** I or II; 2 or 3 cr. Patterns for machine parts. Core making and moulding practice. Prerequisite: courses 1 and 4. Mr. Diamond.

17. **Advanced Pattern Making.** I or II; 2 or 3 cr. Commercial pattern shop work. Prerequisite: course 16, and credit or registration in course 7. Mr. Diamond.

7. **Foundry Work.** I or II; 2 or 3 cr. Bench and machine work; cupola practice. Mr. Payton, Mr. Chisholm.

8. **Forge Work.** II; 2 or 3 cr. Forging, welding, tempering and annealing. Mr. Goddard, Mr. Schumann.

*See also Forest Products Laboratory for lectures on wood structure.

**See also Forest Products Laboratory for lectures on kiln drying.

9. Machine Shop Work. I or II; 2 or 3 cr. (a) Bench work and operation of machine tools. (b) Advanced course: Tool-making and machine construction. Mr. Goddard, Mr. Dabney, Mr. Schmidt.

12. Elementary Handwork. II; 2 or 3 cr. Expressional and technical construction work in the elementary school for those interested as teachers. Prerequisite: credit in course 112 desirable. Miss Wilson.

13. Applied Design. II; 2 or 3 cr. Projects in clay, textiles, paper, and cardboard for those interested as craftsmen. Miss Wilson.

14. Lower Grade Woodwork. II; 2 or 3 cr. Projects in wood for the intermediate grade period for those interested as teachers. Prerequisite: credit in course 112 desirable. Miss Wilson, Mr. Diamond.

DRAWING AND DESIGN

50. Freehand Drawing and Perspective. I; 3 cr. Open to freshmen. Principles of freehand drawing, perspective, light and shade in pencil, pen and ink, and blackboard crayon. Mr. Varnum, Miss Anderson, Miss Wilson.

51. Freehand Drawing and Illustration. II; 3 cr. Cast drawing. Drawing from the living model. Charcoal, pen, and color rendering for illustrative purposes. Principles of composition. Model fee \$1.50. Prerequisite: course 50 or equivalent. Mr. Varnum, Miss Wilson.

52. Methods. Public School Drawing and Design. I or II; 3 cr. Laboratory practice, courses of study, duties of supervision. Prerequisite: course 50. Miss Anderson.

53. Practice. Public School Drawing and Design. Yr.; 1 cr. Teaching under actual schoolroom conditions. Prerequisites: course 50 and credit or registration in course 52. Miss Anderson.

60. History and Appreciation of Design. I; 3 cr. Analysis and critical appreciation of modern architecture and industrial art. History, analysis and application of historic motives. An illustrated lecture course. Mr. Varnum.

61. Civic Art and Design. II; 2 cr. A summary of what the individual may do to improve aesthetic conditions in a community. Planning exterior environment of homes with development of scale models. Mr. Varnum.

62. Industrial Arts Design. I; 3 cr. Principles of design applied to the different materials of the industrial crafts. Prerequisite:

site: credit or registration in courses 1 and 50 or their equivalents. Mr. Varnum.

63. Industrial Arts Design Seminary. Yr.; 1 or 2 cr. Preparation of working drawings developed in laboratory courses. Mr. Varnum.

APPLIED DESIGN

70. Applied Design in Metal (copper, brass, silver, gold, iron). Yr.; 3 cr. Decorative metal work and industrial problems significant to the individual, home and industry. Desirable prerequisites: registration in course 63 or credit in course 62 or equivalent training. Mr. Varnum.

***71. Applied Design in Clay, (pottery).** Yr.; 3 cr. Design and construction; glazing and firing. Desirable prerequisites: registration in course 63 or credit in course 62 or equivalent training. Miss Wilson.

The lectures in laboratory courses each require two hours of preparation. This may be laboratory or outside time depending upon conditions. Those who elect manual arts laboratory courses with a view to teaching should devote as much time as possible to laboratory work.

A fee of \$2 per credit is required for all shop laboratory courses.

For Undergraduates and Graduates

110. History and Literature of Manual Arts. I; 2 cr. Open to juniors and adult specials. The manual training and industrial education movement. Mr. Crawshaw.

111. Organization. I; 2 cr. Open to juniors and adult specials. Detailed study of courses, equipment, and supplies; devices in teaching and administration. Mr. Crawshaw.

113. Vocational Education and Guidance. II; 2 cr. Open to juniors and adult specials. Analysis of the problems of vocational education with particular emphasis upon industrial education. Mr. Crawshaw.

112. The Teaching and Supervision of Manual Arts. Yr.; 2 or 3 cr. Open to seniors and adult specials. What and how to teach the manual and industrial arts in regular and special schools. Mr. Crawshaw.

115. Manual Arts Seminary. Yr.; 1 cr. Open to seniors and adult specials. A study of the larger problems of manual training and vocational education. Mr. Crawshaw.

*For related course see Mining and Metallurgy 126.

114. Special Methods. II; 2 cr. The scientific method applied to individual and community performances in drawing, design and industrial work; applications of scientific management; the educational and industrial survey. Mr. Crawshaw and staff.

100. Senior Thesis Course. Yr.; 2 cr. Mr. Crawshaw, Mr. Varnum.

MATHEMATICS

PROFESSORS SLICHTER (chairman), VAN VLECK; ASSOCIATE PROFESSORS DOWLING, SKINNER; ASSISTANT PROFESSORS BURGESS, DRESDEN, HART, MARCH, WOLFF; INSTRUCTORS ALLEN, BABCOCK, CLEMENTS, PAINE, SIMPSON, TAYLOR, WOOD; ASSISTANT PETERSON.

FELLOW, MR. MOORE.

The courses in Mathematics are divided into three groups, as follows:

A. Courses 1 to 71 are planned to give a working knowledge of elementary mathematics. Courses 1 and 7 are required of students in the Course in Commerce, courses 51 to 55 are required of students in Engineering, and course 71 is required of students in Agriculture.

Students who elect the minimum amount of mathematics in fulfillment of requirement "c" (see requirement for degree of Bachelor of Arts), may choose six hours from any of courses 1 to 8, provided courses 3 and 4 are not both chosen.

Students electing mathematics with a view to teaching the subject in the high schools are referred to the section on mathematics in the course for the training of teachers. Course 5 is strongly recommended in preparation for teaching.

It will be advantageous for all students expecting to elect mathematics to present at least one and one-half units of algebra for entrance.

B. Courses 111 to 125 are designed for students who desire to continue mathematical study and who have completed the requisite courses in group A.

C. Courses 241 to 269 are intended primarily for graduate students.

Major and Minor in Mathematics

The requirements for an undergraduate major in Mathematics consist of a thesis, courses 5 and 6, and a minimum of 11 credits from courses for undergraduates and graduates, inclusive of course 112 or 113.

Students entering the junior class with advanced standing from other institutions and desiring to complete an undergraduate major in mathematics in four semesters should previously have completed the equivalent of course 5. The requirements for mathematics as a major or minor subject in the Course for the Training of Teachers are given on page 261.

For Undergraduates, College of Letters and Science

1. **Algebra.** I or II; 3 cr. For students presenting one unit of algebra for entrance. Prerequisite to all other courses except 2 and 8. Mr. Skinner, Mr. Dowling, Miss Allen, Mr. Clements, Mr. Dresden, Mr. Moore, Mr. Paine, Mr. Peterson, Mr. Simpson.

2. **Trigonometry.** I or II; 3 cr. Plane trigonometry and logarithms. Prerequisite to all other courses except 1, 7, 8, and 124. Mr. Skinner, Miss Allen, Mr. Clements, Mr. Dresden, Mr. Simpson.

3. **Analytic Geometry.** II; 3 cr. Recommended to students presenting one and one-half units of algebra for admission and who have taken or are taking course 2. Miss Allen, Mr. Clements, Mr. Simpson.

4. **Analytic Geometry.** Yr.; 2 cr. Prerequisite: course 2. Mr. Clements, Mr. Simpson.

5. **Calculus.** Yr.; 3 cr. Students who intend to specialize in Mathematics or who desire calculus for applications in science are advised to take course 5 in the sophomore year. Course 4 must be taken simultaneously by students who have not had analytic geometry. Mr. Dowling, Mr. Van Vleck.

6. **Determinants and Analytic Geometry of Three Dimensions.** I; 3 cr. Prerequisite: course 3 or 4. Mr. Dresden.

7. **Commercial Algebra.** I or II; 3 cr. Required of students in the Course in Commerce. Miss Allen, Mr. Clements, Mr. Dresden, Mr. Dowling, Mr. Moore, Mr. Peterson, Mr. Simpson.

8. **Solid Geometry.** I; 3 cr. Mr. Hart, Mr. Simpson.

10. **The Teaching of Mathematics.** I or II; 2 cr. Open to seniors who are preparing to teach mathematics either as major or minor subject. Mr. Hart.

11. The Content of Secondary Mathematics. II; 2 cr. Admission to course restricted to students enrolled in the Course for the Training of Teachers. Mr. Hart.

100. Thesis Course. 2 cr. 1916-17. Mr. Skinner, Mr. Van Vleck.

For Undergraduates, College of Engineering

50. Subfreshman Algebra. I; no cr. For students who fail to pass the examination for admission to course 51. Mr. Babcock, Mr. Wood.

51. Elementary Mathematical Analysis. I or II; 5 cr. Required of freshmen in Engineering. Mr. Slichter, Mr. March, Mr. Wolff, Mr. Babcock, Mr. Paine, Mr. Taylor, Mr. Wood.

52. Elementary Mathematical Analysis. I or II; 5 cr. A continuation of 51. Required of freshmen in Engineering. Mr. Slichter, Mr. March, Mr. Babcock, Mr. Paine, Mr. Wolff, Mr. Taylor, Mr. Wood.

***53. Elementary Mathematical Analysis.** I; 5 cr. A special course in the technical parts of 51 and 52 for students who have had trigonometry and analytic geometry. Mr. Burgess.

54. Differential and Integral Calculus. I or II; 4 cr. For all courses. Required of all sophomores in Engineering. Mr. Slichter, Mr. March, Mr. Wolff, Mr. Paine, Mr. Simpson.

55. Calculus. I or II; 4 cr. Continuation of 54; for all courses. Elementary work in differential equations. Required of sophomores in Engineering. Mr. Slichter, Mr. Wolff, Mr. March, Mr. Paine, Mr. Simpson, Mr. Taylor.

110. Higher Mathematics. Yr.; 3 cr. Differential Equations. Definite Integrals, Fourier Series, and other subjects. Elective for juniors, seniors, and graduate students. Mr. Wolff.

For Undergraduates, College of Agriculture

71. Mathematics for Agricultural Students. I or II; 5 cr. Mr. Babcock, Mr. Wood.

*On account of the large amount of special work in courses 51 and 52, this course is organized for students who have had trigonometry, and analytic geometry in colleges of pure science.

For Undergraduates and Graduates

Course 5 is prerequisite to all courses in this group except 115, 124, and 125.

111. **Advanced Calculus.** I; 3 cr. Mr. Skinner.
112. **Differential Equations.** II; 3 cr. With applications to geometry and mechanics. Primarily a working course for students in Mathematics and Physics. Mr. Skinner.
113. **Theoretical Mechanics.** Yr.; 3 cr. May be taken by those who have had analytic geometry and calculus. Mr. Slichter.
115. **Projective Geometry.** Yr.; 2 cr. Synthetic treatment. Mr. Dowling.
114. **Modern Analytic Geometry.** II; 3 cr. In alternate years. (Omitted 1917-18.) Mr. Dresden.
116. **Introduction to Higher Mathematics.** Yr.; 3 cr. A course for students majoring in Physics. Prerequisite: course 112. (Omitted 1917-18.) Mr. March.
117. **Vector Analysis.** II; 3 cr. Applications to physics and geometry. (Omitted 1917-18.) Mr. Skinner.
118. **Theory of Probabilities and Method of Least Squares.** II; 2 cr. For students of science and economics. Mr. Slichter.
119. **Differential Geometry.** II; 3 cr. In alternate years. The application of the differential calculus to the geometry of twisted curves and surfaces. (Omitted 1916-17.) Mr. Skinner.
120. **Theory of Analytic Functions.** Yr.; 3 cr. In alternate years. (Omitted 1917-18.) Mr. Dresden.
121. **Theory of Functions of a Real Variable.** Yr.; 3 cr. In alternate years. Critical study of infinitesimal analysis. (Omitted 1916-17.) Mr. Van Vleck.
124. **Theory of Life Insurance.** Yr.; 2 cr. Prerequisite: course 7 or its equivalent. Mr. Dowling.
125. **Theory of Equations and Introduction to Higher Algebra.** II; 3 cr. Mr. Dresden.

For Graduates

These courses are varied from year to year according to the needs of the students, other subjects being introduced in addition to those here announced.

241. **Elliptic Functions.** Yr.; 2 cr. In alternate years. (Omitted 1916-17.) Mr. Dowling.
244. **Higher Geometry.** Yr.; 2 cr. In alternate years. (Omitted 1917-18.) Mr. Dowling.
246. **Finite Groups.** Yr.; 3 cr. Mr. Skinner.

250. **Theoretical Hydrodynamics.** Yr.; 2 cr. Mr. Slichter.
251. **Theory of Potential.** Yr.; 2 cr. (Omitted 1917-18.)
Mr. Slichter.
263. **Higher Algebra.** I; 3 cr. (Omitted 1916-17.) Mr. Skinner.
265. **Harmonic Analysis.** Yr.; 3 cr. Mr. March.
266. **Theory of Numbers.** Yr.; 3 cr. (Omitted 1916-17.)
Mr. Skinner.
268. **Partial Differential Equations.** Yr.; 3 cr. Introductory
course with applications to physical problems. Mr. March.
261. **Seminary in the Theory of Functions with Infinitely
Many Variables.** Yr.; 3 cr. Mr. Van Vleck.
Mathematical Club—For instructors, graduates, and seniors
making Mathematics their major. Twice monthly. The object
of the club will be to follow important recent developments in
mathematics.

METEOROLOGY

MR. ERIC R. MILLER, of the U. S. Weather Bureau.

Courses 1 and 2 are intended to afford a general survey of atmospheric processes and their effects upon life on the earth. Courses 103 and 106 are planned to prepare students of agriculture, commerce, engineering, journalism, medicine, physical geography, etc., for the treatment of meteorological and climatological questions of importance in their professions, and to fit students for the investigation of special problems in meteorology. Further opportunity to pursue original research under supervision will be provided if desired.

For Undergraduates

1. **Weather and Climate.** I; 2 cr. Mr. Miller.
2. **Climate and Man.** II; 2 cr. Mr. Miller.

For Undergraduates and Graduates

103. **Meteorology.** I; 3 cr. Prerequisites: Mathematics 111 and 112, and Physics 2, or equivalents. Mr. Miller.
106. **Climatology.** II; 3 cr. Prerequisites: Geology 109, 113, and Political Economy 130, or equivalents. Mr. Miller.

MUSIC

Emeritus PROFESSOR PARKER; PROFESSORS DYKEMA, MILLS (chairman); ASSISTANT PROFESSOR REGAN; INSTRUCTORS BERGMAN, CHAMBERLAIN, EASTMAN, VON GELTCH, SAUGSTAD, TOWNSEND, CRANE, CARTER, CURRIE.

The courses in Music, except course A, are open as electives to all students, freshmen excepted, in any department of the University who show sufficient musical ability to pursue them with profit, and receive the same credit as similar courses in other departments of the University, except when otherwise specifically stated in the following explanatory statements.

Course A is open to election in the freshman year by candidates for the degree of Bachelor of Arts, in addition to a minimum of fourteen hours, but does not count as part of the required 120 credits.

Students may be admitted to advanced courses on examination.

Students may elect one or more studies in applied music* on examination, and upon the recommendation of the Director of the School of Music, but without credit toward graduation except as specified under course 81.

See the statement of the School of Music.

THEORY AND PRACTICE

For Undergraduates

- A. **Elementary Harmony.** Yr.; no cr. Miss Eastman.
- 1. **Harmony.** Yr.; 3 cr. Prerequisite: course A. Miss Eastman.
- 11. **Harmony.** Yr.; 2 cr. Prerequisite: course 1. Miss Carter, Mr. Mills, Mr. Townsend.
- 21. **Counterpoint.** Yr.; 2 cr. Prerequisite: course 11. Mr. Mills.
- 31. **History.** Yr.; 2 cr. Lectures on the development of the art. Mr. Mills.
- 41. **Methods. Public School Music.** Yr.; 3 cr. Miss Crane.
- 42. **Practice. Public School Music.** Yr.; 1 cr. Miss Crane.
- 44. **Education.** Yr.; 1 cr. For supervisors. Miss Crane.

*By the term applied music is meant individual instruction in voice culture or some instrument.

45. **Public School Music.** Yr.; 2 cr. For grade and high school teachers.

51. **Methods. Public School Music.** Yr.; 2 cr. Mr. Dykema.

52. **Practice. Public School Music.** Yr.; 2 cr. Mr. Dykema.

61. **Appreciation of Music.** Yr.; 2 cr. Lectures with practical illustrations; music students only. Mr. Dykema.

65. **Appreciation of Music.** Yr.; 1 cr. Lectures with practical illustrations; open to student body. Mr. Chamberlain.

71. **Sight Singing and Ear Training.** Yr.; 2 cr. Miss Crane.

75. **Sight Singing and Ear Training.** Yr.; 1 cr. Mr. Chamberlain, Miss Crane.

78. **Community Music.** I; 2 cr. Mr. Dykema.

79. **Selection and Interpretation of Music Material.** II; 2 cr. Mr. Dykema.

80. **Applied Music.** No college credit. Course for beginners in Applied Music.

81. **Piano.** Yr.; cr. to be arranged. Miss Carter, Mr. Townsend.

82. **Voice.** Yr.; cr. to be arranged. Miss Bergman, Mr. Chamberlain, Miss Currie.

83. **String and Orchestral Instruments.** Yr.; cr. to be arranged. Mr. von Geltch, Mr. Saugstad.

84. **Organ.** Yr.; cr. to be arranged. Mr. Mills, Miss Eastman.

85. **Ensemble.** Yr.; 2 cr. Miss Carter, Miss Bergman.

86. **Ensemble.** Yr.; 2 cr. Miss Carter, Miss Bergman.

87. **1, 2, 3, 4, Second Subject in Applied Music.** Yr.; 1 cr.

88. **1, 2, 3, 4, Second Subject in Applied Music.** Yr.; 1 cr.

89. **Elements of Practical Instrumentation.** Yr.; 1 cr. Mr. von Geltch, Mr. Saugstad.

76. **Orchestra.** Yr.; 1 cr. Prerequisite: the ability to play some instrument. Mr. Saugstad.

77. **Choral Music.** Yr.; $\frac{1}{2}$ cr. Mr. Dykema.

Thesis. Yr.; 2 cr.

For Graduates and Undergraduates

102. **Harmony.** Yr.; cr. to be arranged. Prerequisite: course 11. Mr. Mills.

112. **Counterpoint.** Yr.; cr. to be arranged. Mr. Mills.

*122. **Double Counterpoint, Canon and Fugue.** Yr.; 2 cr. Mr. Mills.

*152. **Instrumentation.** Yr.; 2 cr. Mr. Mills.

*162. **Composition.** Yr.; 2 cr. Small forms, etc. Mr. Mills.

For Graduates

***211. Modern Orchestration.** Yr.; hours to be arranged.
Prerequisite: course 11. Mr. Mills.

***265. Free Composition.** Yr.; hours to be arranged. Pre-
requisite: course 162. Mr. Mills.

PATHOLOGY AND MEDICAL BACTERIOLOGY

PROFESSOR BUNTING (chairman); ASSOCIATE PROFESSOR CLARK;
INSTRUCTORS HARALSON, NEUMANN; ASSISTANTS BOGART, CAMPBELL.

For full description of courses in Pathology, see announcement
under Medical School.

For Undergraduates and Graduates

101. General and Special Pathology. I; 6 cr.

102. Medical Bacteriology. I; 5 cr.

103. Experimental Pathology. II; 4 cr. Class limited to 9
members.

106. Oncology. A study of tumors. II; 2 cr. Prerequisite:
course 101.

104. Immunity. II; 4 cr. Prerequisite: course 102.

107. Sources and Modes of Infection. II; 3 cr. Given in
conjunction with Hygiene 126.

For Graduates

204. Advanced Pathology.

205. Journal Club. Yr.; 1 cr.

206. Advanced Bacteriology.

*Alternate years.

PHARMACOLOGY AND TOXICOLOGY

PROFESSOR LOEVENHART (chairman); INSTRUCTOR MARTIN;
ASSISTANT MALONE.

For full description of courses in Pharmacology and Toxicology,
see announcement under Medical School.

101. General Toxicology. II; 1 cr. Lectures. Mr. Loevenhart, Mr. Martin.

102. General Toxicology. II; 1 cr. Laboratory. Mr. Loevenhart, Mr. Martin, Mr. Malone.

104. General Pharmacology. I; 2 cr. Lectures. Mr. Loevenhart, Mr. Martin.

105. General Pharmacology. I; 2 cr. Laboratory. Mr. Loevenhart, Mr. Martin, Mr. Malone.

108. Advanced Work. Mr. Loevenhart.

112. Independent Investigation. Mr. Loevenhart.

116. Journal Club. Yr.

PHARMACY

PROFESSOR KREMERS (chairman); INSTRUCTORS LANGENHAN,
WAKEMAN.

For Undergraduates

1. Pharmaceutical Technique. Yr.; 3 cr. Miss Wakeman.

20. Elementary Prescription Practice. 3 cr. Mr. Langenhan.

30. Pharmaceutical Technology. II; 4 cr. An elementary course in the preparation of first materials. Mr. Langenhan.

40. Drug Store Practice. Yr.; 1 cr. Mr. Kremers and special lecturers. (Given 1916-17.)

50. History of Pharmacy. Yr.; 1 cr. (Given 1917-18.) Mr. Kremers, Miss Wakeman.

Thesis. Mr. Kremers.

For Undergraduates and Graduates

121. Advanced Prescription Practice. I; 2 cr. Mr. Langenhan.

132. Advanced Pharmaceutical Technology. Cr. to be arranged. Mr. Langenhan.

For Graduates

221. Advanced Pharmaceutical Technology. (Given 1916-17.) Mr. Kremers.

Conference of Research Workers. 1 or 2 hours. Discussion of problems arising in research work. Mr. Kremers.

Graduate Thesis. To be arranged. Mr. Kremers.

PHILOSOPHY AND PSYCHOLOGY

PROFESSORS JASTROW, MCGILVARY (chairman), SHARP; ASSOCIATE PROFESSOR OTTO; ASSISTANT PROFESSOR STARCH; INSTRUCTORS HULL, KALLEN; ASSISTANT THAYER.

The student is at liberty to begin his work in Philosophy with any of the courses designated as for undergraduates. But beginners who desire to take three hours of work throughout the year in the department, whether they wish to continue with the subject or not, will ordinarily find it most profitable to select course 1 or 31 in the first semester, and either 11, 21, 32, or 41 in the second semester.

The requirements for an undergraduate major in Philosophy are a minimum of twenty-four credits including the thesis. Of these, at least twelve credits must be obtained in the courses "for undergraduates and graduates."

For Undergraduates

1. Psychology. I or II; 3 cr.

Section 1. I. Mr. Jastrow, Mr. Starch, Mr. Hull.

Section 2. I. Mr. Sharp, Mr. Otto, Mr. Hull.

Section 3. II. Mr. Starch, Mr. Hull.

These sections are equivalent for credit and record, but the content and scope differ considerably.

11. Elementary Logic. I or II; 3 cr. Mr. Otto, Mr. Thayer.

19. Psychological Principles of Advertising. II; 2 cr. Mr. Starch.

21. Introduction to Philosophy. I or II; 3 cr. Mr. McGilvary.

23. Six English Philosophical Poets—Langland, Spenser, Milton, Shelley, Swinburne, Walt Whitman. I and II; 3 cr. Mr. Kallen.

25. The Relation of Man to Nature. I; 2 or 3 cr. Mr. Otto.

31. History of Ancient and Medieval Philosophy. I; 3 cr. Mr. Kallen.

32. History of Modern Philosophy. II; 3 cr. Mr. Otto.

41. Ethics. II; 3 cr. Introductory course. Mr. Sharp.

42. Social and Political Ethics. II; 2 cr. Moral rights; especially personal liberty, freedom of contract; national independence, suffrage; the moral authority of the state; international morality. Mr. Sharp.

43. Business Ethics. I; 2 cr. With special reference to fair competition. Mr. Sharp.

Courses 42 and 43 may be taken independently of one another. For neither is 41 a prerequisite.

44. History of Morality. I; 2 or 3 cr. Primitive and ancient moral practices and ideals. (Omitted 1917-18.) Mr. McGilvary.

49. Moral Education. II; 2 cr. With special reference to the high school. Mr. Sharp.

51. Aesthetics. I; 2 cr. Including practical applications to art. Mr. Jastrow.

For Undergraduates and Graduates

103. Experimental Psychology. Part I. I; 3 cr. Lectures and laboratory, dealing with sensation, perception, movement, reactions, and the simpler functions of the mental life. Mr. Jastrow, Mr. Hull.

104. Experimental Psychology. Part II. II; 3 cr. Lectures and laboratory, dealing with memory, association, attention, imagination, reasoning, the emotions, and the more complex manifestations of the mental life. Mr. Jastrow, Mr. Hull.

Either course 103 or 104 may be taken in advance of the other, or separately. Course 1 or its equivalent is a desirable prerequisite for courses 103, 104, 106, 107, 108, 109.

105. Research in Psychology. Cr. to be arranged. Mr. Jastrow, Mr. Starch.

106. **Comparative Psychology.** I; 2 cr. Mr. Jastrow.
107. **Abnormal Psychology.** I; 2 cr. (Omitted 1917-18.) Mr. Jastrow.
108. **Psychology of the Emotions.** II; 2 cr. Mr. Jastrow.
109. **Racial Psychology.** II; 2 cr. The psychology of groups in natural and artificial circumstances. (Omitted 1917-18.) Mr. Jastrow.
110. **Experimental Psychology for Premedical Students.** II; 2 cr. Mr. Jastrow, Mr. Hull.
111. **Psychology of Language.** II; 2 cr. Mr. Jastrow.
134. **Contemporary Philosophy.** Yr.; 3 cr. Prerequisite: courses 21, 25, 31, or 32. Mr. McGilvary.
135. **Descartes, Spinoza and Leibniz.** I; 3 cr. Prerequisite: courses 21, 25, 31, or 32. (Omitted 1917-18.) Mr. Kallen.
136. **Locke, Berkeley, Hume.** I; 3 cr. Prerequisite: courses 21, 25, 31, or 32. Mr. Kallen.
137. **Kant.** II; 3 cr. *The Critique of Pure Reason.* Prerequisite: courses 21, 25, 31, or 32. Mr. Kallen.
138. **Typical Theories of Life.** Yr.; 3 cr. Historic definitions of the ideals of Happiness, Duty, Salvation, and Progress. The Life of Reason. Mr. Kallen. Prerequisite: 3 cr. in philosophy.
139. **American Philosophy.** II; 2 cr. Special reference to Jonathan Edwards, Ralph Waldo Emerson, and William James. Prerequisite: courses 21, 31, or 32. Mr. Otto.
154. **The Philosophy of Art.** II; 3 cr. Historic conceptions; basis and material; character and value of art. Place of art in civilization. Mr. Kallen. Prerequisite: 3 cr. in philosophy.
155. **Metaphysics.** II; 3 cr. Historical solutions of the metaphysical problems. Contemporary metaphysics—Buddhism, neo-Aristotelianism, Idealism, Pragmatism, neo-Realism. (Omitted 1917-18.) Mr. Kallen. Prerequisite: 3 cr. in philosophy.

For Graduates

210. **Psychological Seminary.** Mr. Jastrow.
213. **Logical Seminary.** Mr. Otto.
240. **Metaphysical Seminary.** Mr. McGilvary.
247. **Ethical Seminary.** Mr. Sharp.

PHYSICAL EDUCATION

PROFESSOR HETHERINGTON; ASSOCIATE PROFESSOR MEANWELL, Director Men's Gymnasium; ASSISTANT PROFESSORS TRILLING, Director Women's Gymnasium, ELSOM, JONES (chairman), WITHINGTON; INSTRUCTORS BROWN, BROWNELL, DRIVER, FORBES, HINDMAN, LIPPITT, MCKEE, MCCHESENEY, QUICK, STEVENSON, VAIL; ASSISTANTS AYER, BUCK, KING, STEINAUER, SOUCY; STUDENT ASSISTANTS WYATT, KNOTT, WHITE, DOHERTY, SANDS.

For further information see departmental Circular. Also Department of Physical Education, page 427.

Courses are planned to meet the needs of four classes of students: first, students desiring to major in Physical Education and to become responsible instructors or directors; second, students desiring to minor in Physical Education in preparation for combining leadership of physical training activities with some academic subject in high schools; third, students desiring a general familiarity with the problems of physical education as a part of their equipment for positions as principals or superintendents in the public schools or for positions as social centre directors; fourth, students desiring academic courses in Physical Education as a part of a liberal education.

Major

The requirements for a major are designed to prepare students for the responsible direction of physical training activities in all their developmental, hygienic, and social relationships.

These responsibilities require a training in the several phases of physical education with a preliminary training in biology, chemistry, anatomy, physiology and psychology. Students desiring to major in Physical Education should declare their intentions at the time of entrance to the University and consult with the instructor as to their fitness to undertake the work.

No university credit will be given in the special technique courses except to students majoring or minoring in Physical Education.

Students regularly entered in the College of Letters and Science electing their major in Physical Education are required to take courses 20 for four years, 56, 59, 63, 67, 107, 108, 114; courses 21-50 (at least four credits) and thesis (4 credits), a total of 30 credits;

Physical Education 19 or Education A; Anatomy 121, Physiology 114, and 105 or 115, and satisfy prerequisites in biology, chemistry, and psychology, or their equivalents. Additional credit in physical education may be secured in courses 107, 16, 55, 62, 66, 68, 70, 80, and 21-50.

Minor

The requirements for a minor are designed especially for students preparing to teach some other subject in the schools and assist in physical education.

Students electing Physical Education as a minor subject must take courses 20 for at least two years, 59 or 107, 67 (2 credits) 66, and 21-50 for four credits, a minimum of 10 credits. Physical Education 19 or Education A may also be required depending on the major subject of the student. Additional credits may be secured in courses 16, 55, and 21-50. Prerequisites are zoology or chemistry, Physiology 1 and Philosophy 1, and elementary education, at least 3 credits.

Teachers Certificate

Graduates with a major in Physical Education who have been registered in the Course for the Training of Teachers will be entitled to receive the University Teachers Certificate upon fulfilling the major requirements and completing the following courses: Psychology (Philosophy 1) 3 credits; Education, 5 credits, and the Departmental Teachers Course. A total of one hundred and twenty-eight credits is required. Graduates will also be entitled to a special state certificate given by the State Board of Education.

Courses of Instruction

1. **Developmental Exercises.** 1 or 2 cr. Prescribed for all freshmen and such sophomores as have not attained the requisite development. Men, two hours; women, four hours, weekly.

2. **Advanced Exercises.** 1 to 4 cr. Systematic courses in athletics—track and field events, cross country running, baseball, basketball, football (intercollegiate, soccer), tennis, field hockey, etc.; aquatics—swimming, rowing, water polo, diving, life saving; gymnastics—advanced apparatus exercises, gymnastic, folk and esthetic dancing, tumbling; wrestling, fencing and boxing. The work of the various class and varsity teams is included in this

course. Open to all students who have attained the required degree of organic power and bodily skill. Prescribed for sophomores who have completed course 1. Prerequisite: course 1 or its equivalent.

3. Special Corrective Exercises. 1 or 2 cr. Required of all freshmen and sophomores unfitted to take courses 1 and 2.

4. Efficient Living. The laws of personal and general hygiene. Given with course 1.

19. Practice Teaching. Cr. to be arranged. Mr. Hetherington, Miss Trilling.

20. General Technique. a. Men. b. Women. For professional students. The practice course for students majoring or minoring in Physical Education. Parallel to courses 1 and 2, including in addition instruction in nomenclature, elementary organization of materials, methods of leading sections and squads, and practice leading in courses 1 and 2. The course covers four years for major and two years for minor students.

21-50. Special Organization and Methods. Cr. to be arranged. Special studies of the more complex activities used in physical education, from the standpoint of leadership, instruction, training, and special management. Each activity includes lectures, demonstrations, practice and practice teaching as may be assigned. Prerequisite: Personal skill in the performance of each activity acquired in course 20 or its equivalent.

Men.

21. Gymnastics (tactics, calisthenics, apparatus, tumbling). **22.** Plays and games including tennis and handball. **23.** Basketball. **24.** Track and field. **25.** Swimming and boating. **26.** Dancing (men and boys). **27.** Baseball. **29.** Football—American. **30.** Soccer, field hockey, and ice hockey. **34.** Boxing, fencing, and wrestling.

21, 22, 23, 24 required for major or certificate.

Women.

41. Gymnastics (tactics, calisthenics, apparatus). **42.** Plays and games. **43.** Folk dancing. **44.** Basketball and field hockey. **45.** Swimming and boating. **46.** Advanced folk and esthetic dancing. **47.** Baseball and track and field. **48.** Rowing. **50.** Fencing, archery, and tennis.

41, 42, 43, 44 required for major or certificate.

16. First Aid to the Injured. I; 1 cr. Mr. Elsom.

55. History of Physical Education. II; 2 cr. Mr. Elsom.

56. Kinesiology. II; 2 cr. Prerequisites: course 20 and Anatomy 121. Mr. Hetherington.

107. Physiology of Exercise (Physiology 116.) I; 3 cr. Prerequisites: course 56 and Physiology 105 or 115 (see Department of Physical Education, p. 427). Mr. Eyster, Mr. Dawson, Mr. Meek.

108. The Principles of Physical Education. II; 3 cr. Prerequisites: Zoology 1a and 1b, Physiology 1 and 2 or 105 or 115, and Philosophy 1. Mr. Hetherington.

59. Nature, Function, and Organization of Play. I; 3 cr. Prerequisites: Philosophy 1. Mr. Hetherington.

62. Growth and Development. I; 2 cr. Growth and development of tissues and organs in relation to organic and neuro-muscular education. Prerequisite: Zoology 1a and 1b or Physiology 1 and 2 and Philosophy 1. Mr. Hetherington.

114. Medical Examination. II; 3 cr. (Clinical Medicine 101.) Prerequisite: Physiology 105 or 115. Mr. Evans.

63. Physical Examinations and Gymnastic Therapeutics. Yr.; 2 cr. Prerequisites: Anatomy 121 and Physical Education 56. Either preceded by or taken in conjunction with Physical Education 107 and 114. Mr. Elsom, Miss Lippitt.

66. The Management or Practical Conduct of the Playground. I; 1 cr. Prerequisite: course 59. Must be accompanied by course 22 or 42. Mr. Meanwell.

67. Principles of Teaching and Adaptation. Yr.; 2 cr. 1st semester: The psychology of leadership, coaching, etc. 2d semester: The principles of selection, and adaptation of motor activities to individuals and groups, differentiated by sex and age. Students taking Physical Education as a minor may take the first semester alone. Prerequisites: courses 20, and 59 or 107, and for the second semester 56 and 107. Mr. Hetherington.

68. Organization and Administration of Physical Education. I; 3 cr. Prerequisites: courses 20, 108, 59, and 67. Mr. Hetherington.

70. Educational Athletics. I; 1 cr. Values, analysis of evils and origins; problems in the successful organization for the masses. Prerequisite: course 59 or 108. Mr. Hetherington.

80. Public Recreation. II; 2 cr. Custom in recreation, social changes and the new attitude; the needs of different classes of people; the effects of activities and the agencies in the organization of recreation. Prerequisites: Physical Education 59, or three credits in Education or Sociology. Mr. Hetherington.

PHYSICS

PROFESSORS MASON, MENDENHALL, SNOW (chairman); **ASSOCIATE PROFESSOR** INGERSOLL; **ASSISTANT PROFESSORS** FULCHER, GAGE, ROEBUCK, STEVE, TERRY; **INSTRUCTOR** GRAY; **ASSISTANTS** ANGEL, BARR, BUTLER, COOK, GREENSLADE, HOOVER, JOHNSON, NICHOLS, ORVIS, PETERSEN, PRINE, RAMENSTEIN, SZLUPAS, TAYLOR, WATSON, WILLIAMSON, SHARP.

In order to adapt the instruction in Physics to students of different degrees of preparation, the introductory course in this study is given in two sections. Course 1 is planned for those who have only a high-school training in mathematics, while course 1Sc. is designed for those who have had or are taking the mathematics of the freshman year. Following these general courses, seven other elementary courses are given for those who desire a further knowledge of the subjects treated in courses 1 and 1Sc. and for those who are preparing to teach. Courses 110-120 are more advanced in nature and lead to courses 210-220, which are strictly graduate in character, and are arranged with reference to those who are making a special study of the higher branches of physics.

For Undergraduates

1. General Physics. Yr.; 5 cr. Lectures, recitations, and laboratory practice. Open to all students. Mathematical preparation is not a prerequisite. Mr. Snow, Mr. Gage, Mr. Roebuck, Mr. Steve, Mr. Gray, Mr. Dahm.

1Sc. General Physics. Yr.; 5 cr. Lectures, recitations, and laboratory are fully coordinated. Students who have had or are taking freshman mathematics are advised to elect this course in preference to course 1. Mr. Snow, Mr. Mendenhall, Mr. Mason, Mr. Ingersoll, Mr. Gage, Mr. Roebuck, Mr. Fulcher.

2. Light and Heat. I; 3 cr. Intended to follow course 1 or 1Sc. and leads to course 117. Mr. Ingersoll.

3. Laboratory in Light and Heat. I; 2 cr. Designed to accompany course 2. Mr. Mendenhall, Mr. Fulcher.

4. Electricity and Magnetism. II; 3 cr. Advanced lectures. Introductory to course 116. Mr. Terry.

5. Laboratory Practice in Electricity and Magnetism. II; 2 cr. Designed to accompany course 4. Mr. Terry, Mr. Greenslade.

7. **Photography.** II; 2 cr. Designed to give practical knowledge in the various lines of scientific work. Mr. Roebuck.

8. **The Teaching of Physics.** II; 2 cr. A training course for teachers. Mr. Steve.

100. **Thesis.** Yr.; 2 cr. Mr. Mendenhall, Mr. Ingersoll, Mr. Terry.

ENGINEERING COURSES

51. **Mechanics, Sound, and Light.** I; 5 cr. Mr. Terry, Mr. Gage.

51. **Mechanics, Sound, and Light.** II; 5 cr. Mr. Fulcher, Mr. Gage and staff.

52. **Heat, Electricity, and Magnetism.** II; 5 cr. These courses are similar to courses 1 and 1Sc., but more technical. Mr. Terry, Mr. Ingersoll, Mr. Gage, Mr. Fulcher, Mr. Williamson.

54a. **Electrical Measurements.** I; 2 cr. Required of juniors in Electrical Engineering, and elective for students in other Engineering courses. Mr. Terry, Mr. Greenslade.

53. **Mechanics, Electricity and Magnetism.** I; 3 cr. Required of sophomores in Electrical Engineering. Mr. Roebuck, Mr. Gage and staff.

54. **Wave Motion, Sound, and Heat.** II; 3 cr. Continuation of course 53. Mr. Mendenhall, Mr. Gage and staff.

55. **Advanced Electricity and Magnetism.** I; 3 cr. Required of juniors in Electrical Engineering. Mr. Terry and Mr. Fulcher.

56. **Electricity and Light.** II; 3 cr. Continuation of course 55. Mr. Terry and Mr. Fulcher.

AGRICULTURAL COURSES

61. **Mechanics and Heat, Electricity and Magnetism.** Yr.; 3 cr. Prerequisite: Mathematics 71. Mr. Gage and staff, Mr. Hoover, Mr. Petersen.

65. **General Physics.** Yr.; 3 cr. Required of sophomores in the Course in Home Economics. Mr. Snow, Mr. Gage and staff, Mr. Steve.

For Undergraduates and Graduates

110. Laboratory Arts. I; 1 cr. A course in technique. Mr. Roebuck, Mr. Foerst.

111. Advanced Photography. I; 2 cr. Practice in the reproduction of color values. Mr. Brown.

112. High and Low Temperature Measurements. I; 2 cr. Mr. Ingersoll.

113. Modern Optical Instruments. II; 1 cr. An advanced laboratory course, designed to follow courses 2 and 3, which are prerequisites, or to accompany course 117. Mr. Ingersoll.

114. Advanced Electrical and Magnetic Measurements. II; 2 cr. Prerequisites: course 4 or 54. Mr. Terry, Mr. Greenslade.

115. Radioactivity and Discharge Through Gases. I; 3 cr. Prerequisites: courses 2 and 3, or 4 and 5. Mr. Fulcher.

116. Introduction to the Theory of Electricity. I; 3 cr. The more important methods and concepts are treated mathematically. Mr. Mason.

117. Physical Optics. II; 3 cr. Special topics in physical optics. Mr. Mendenhall.

118. Elements of Theoretical Physics. Yr.; 3 cr. The potential function, the conduction of heat, and the kinetic theory of gases. Mr. Ingersoll.

119. Advanced Laboratory Practice. For those beginning graduate study. Yr.; 3 cr. Mr. Mendenhall, Mr. Terry.

120. Colloquium. Yr.; 2 cr. Mr. Mendenhall.

For Graduates

211. Advanced Dynamics. Yr.; 3 cr. The mechanics of rigid, fluid, and elastic bodies; wave motion; sound. Prerequisite: a course in analytical mechanics. Mr. Mason.

213. Statistical Mechanics. II; 2 cr. (Omitted 1917-18.) Mr. Mason.

214. Thermodynamics. Yr.; 3 cr. An advanced course with special application to problems of radiation. Mr. Mendenhall.

215. Theory of Electricity. Yr.; 3 cr. A mathematical treatment of the Maxwell theory and its later developments, based on the electron hypothesis. (Omitted 1917-18.) Mr. Mason.

216. The Electromagnetic Theory of Light. Yr.; 3 cr. (Omitted 1917-18.) Mr. Mendenhall.

217. Electron Theory. II; 2 cr. Mr. Mason.

220. Graduate Research. Yr.; hours to be arranged. Mr. Mason, Mr. Mendenhall, Mr. Ingersoll, Mr. Terry, Mr. Roebuck, Mr. Fulcher.

PHYSIOLOGY AND PHYSIOLOGICAL CHEMISTRY

PROFESSOR EYSTER (chairman); ASSOCIATE PROFESSORS BRADLEY, MEEK; ASSISTANT PROFESSOR DAWSON; ASSISTANTS HODGES, TAYLOR, GIBSON, KILEY.

For Undergraduates

1. **Elements of Physiology.** I; 3 cr. Lectures, demonstrations, and recitations. Especially adapted to teachers of elementary physiology and hygiene. Required of sophomores in the Course in Home Economics (2 cr.); open to other students, who should have had some chemistry. Mr. Meek, Mr. Dawson, Mr. Hodges.

2. **Elements of Physiology.** I; 1 cr. Laboratory. Required of sophomores in the Course in Home Economics, open to others as an elective. Mr. Meek, Mr. Dawson, Mr. Hodges.

3. **Animal Physiology.** II; 4 cr. Lectures, demonstrations and laboratory. Primarily adapted to students in agriculture, but open to others as an elective. Prerequisites: chemistry and zoology. Mr. Meek, Mr. Kiley.

For Undergraduates and Graduates

104. **Physiological Chemistry.** I; 4 cr. Lectures, conferences, and laboratory. Required of juniors in Medicine and open to others as an elective. Prerequisite: general and organic chemistry, physics, and biology. Mr. Bradley, Mr. Taylor. Mr. Gibson.

114. **Physiological Chemistry.** I; 3 cr. Lectures, conferences, and laboratory. Required of juniors in Physical Education and open to others as an elective. Prerequisite: general and organic chemistry, physics, and biology. Mr. Bradley, Mr. Taylor, Mr. Gibson.

105. **Physiology.** II; 9 cr. Lectures, recitations, demonstrations, and laboratory. Required of juniors in Medicine and open to others as an elective. Prerequisite: comparative or human anatomy, histology, neurology, and physiological chemistry. Mr. Eyster, Mr. Meek, Mr. Dawson, Mr. Hodges, Mr. Kiley.

115. **Physiology.** II; 7 cr. Lectures, recitations, demonstrations, and laboratory. Required of juniors in Physical Education and open to others as an elective. Prerequisites: Anatomy 105, Physiological Chemistry 104 or 114. Mr. Eyster, Mr. Meek, Mr. Dawson, Mr. Hodges, Mr. Kiley.

116. Physiology of Exercise. I; 3 cr. Lectures and laboratory. Required of seniors in Physical Education; open to others as an elective. Prerequisite: Physiology 105 or 115. Mr. Eyster, Mr. Meek, Mr. Dawson.

117. Advanced Physiological Chemistry and Research. Yr.; credit according to work done. Mr. Bradley.

118. Advanced Physiology and Research. Yr.; credit according to work done. Mr. Eyster, Mr. Meek.

120. Journal Club. Yr.; 1 cr. Reports on recent physiological and biochemical literature. Mr. Eyster.

For Graduates

208. Advanced Laboratory Course in Physiology. Designed for teachers of animal physiology as well as for physicians and students of medicine who desire a wider experience in experimental physiology than can be gained in course 105. Mr. Eyster.

210. Advanced Laboratory Course in Physiological Chemistry. Corresponds to course 208.

POLITICAL ECONOMY

PROFESSORS COMMONS, ELY (chairman), GILLIN, GILMAN, HIBBARD, ROSS, SCOTT, TAYLOR, URDAHL; ASSOCIATE PROFESSORS ELWELL, HESS; ASSISTANT PROFESSORS KIEKHOFFER (secretary), KING, MELVILLE, TRUMBOWER; LECTURERS ANDERSON, BURHOP; INSTRUCTORS EBERLE, JEROME, KUECHENMEISTER; ASSISTANTS BOULWARE, HAAKE, KINNEY, KRUEGER, LAMMEL, MCKAY, MILLER (NINA), MILLER (S. L.), ROBINSON, VAUGHAN, WITTE; FELLOWS BLACK, GUSTAFSON, HODGSON; SCHOLARS GARNETT, LUNDY.

Aims

The studies offered by the department are elective in all the colleges of the University. The graduate work of the department may lead to the master's degree in not less than one year, and to the doctor's degree in not less than three years.

The work of this department has the following distinct but related aims:

1. To provide instruction in economics and sociology for undergraduates in all the colleges of the University.

2. To provide advanced and graduate work in the studies falling within its field.
3. To assist and encourage the development of economic studies.
4. To provide special training for business pursuits.
5. With the cooperation of other departments to provide special training courses for various practical pursuits.
6. To supplement the work of the Law School.

Attention is here called to the fact that graduates who are pursuing the law course may prepare to take their master's degree at the same time with the degree in law by completing the equivalent of two full studies during one year's work. Graduates of the Law School are encouraged to devote an additional year to broadening their training in economics, politics, and jurisprudence.

Especial attention is called to the large number of related courses in philosophy and ethics and also to the considerable number of similar courses in journalism.

Political Economy as an Undergraduate Major

The requirements for an undergraduate major, in addition to the thesis, are twenty-four credits as a minimum, selected in part from the advanced courses.

Political Economy as a Graduate Major

Candidates for the degree of Doctor of Philosophy in this department are required to present in their principal subject the equivalent of at least two full graduate courses during two years; in their first subordinate the equivalent of at least one such course during two years; and in their second subordinate the equivalent of at least one such course during one year.

All such candidates will be expected to be familiar with the history of economic thought, the elements of statistics, and the principles of political economy as presented in advanced modern treatises.

Each candidate must have also made an intensive study of at least one of the following special fields: economic theory and institutions, sociology, labor, public finance, money and banking, corporation and trust control, agricultural economics, transportation. In the special field or fields selected, the candidates will be expected to exhibit not only thorough knowledge of the literature, methods of study, the social bearings of the subjects included, but also ability to prosecute research.

Candidates for the master's degree must present in their principal subject the equivalent of at least two full graduate courses during one year, and in their subordinate subject the equivalent of at least one such course.

Political Economy as a Graduate Minor

For a minor, candidates whose major falls in another department may present either the general subjects required of all candidates with a major in Economics, or any one of the special groups mentioned above. Candidates for the degree of Doctor of Philosophy may select their major and one of their minors in this department.

Prerequisites for Graduate Work

Ordinarily no student will be admitted to courses designated "for graduates," unless he has had a satisfactory undergraduate course including at least one year's work in the principles of economics and the elementary work in the field covered by the graduate course.

For Undergraduates

For courses in Agricultural Economics, see the announcement of the Department of Agricultural Economics of the College of Agriculture.

1a. Elements of Economics. I or II; 4 cr. Economic principles. Repeated each semester. Mr. Kiekhofer, Mr. Black, Mr. Eberle, Mr. Haake, Mr. Jerome, Mr. Krueger, Mr. McKay, Mr. Miller, Mr. Vaughan, Mr. Witte.

1b. Elements of Economics. II; 4 cr. Economic problems. Prerequisite: Political Economy 1a. Mr. Kiekhofer, Mr. Jerome, Mr. McKay, Mr. Miller.

2. Social Evolution. I; 1 or 2 cr. May be taken by seniors for 2 cr. Illustrated. Mr. Ross.

3. Elements of Public Finance. I; 3 cr. Prerequisite: Political Economy 1a. (Omitted 1916-17.) Mr. Urdahl.

4. Social Problems. II; 3 cr. Contemporary questions relating to the family, the race, and the social order. Mr. Ross.

5. The Elements of Money and Banking. I or II; 3 cr. Prerequisite: Political Economy 1a. Mr. Scott, Mr. Haake, Mr. Jerome.

***8a, 8b. The Elements of Accounting.** Yr.; 2 cr. Mr. Elwell and staff.

***11. Factory and Office Management.** I; 2 cr. Plant location and structure, and the organization and management of industrial forces. Prerequisite: junior standing. Given in alternate years with Political Economy 13. (Given 1916-17.) Mr. Trumbower.

***12. Buying and Credits.** II; 2 cr. Prerequisite: Political Economy 11. Given in alternate years with Political Economy 14. (Given 1916-17.) Mr. Gilman.

12. Agricultural Rural Life. II; 2 cr. Mr. Galpin.

***13. Marketing Methods.** I; 2 cr. Distribution of manufactured goods, with especial attention to problems involved in the relations of manufacturers, middlemen, and consumers. Prerequisite: junior standing. Given in alternate years with Political Economy 11. Mr. Trumbower.

***14. Sales Administration.** II; 2 cr. Organization of sales departments and technique of selling. Prerequisite: Political Economy 13. Given in alternate years with Political Economy 12. Mr. Gilman.

***15. Retail Advertising.** I; 2 cr. A study of principles, and practice in writing advertisements. Prerequisite: Philosophy 119 and English 4. Mr. Gardner.

***16. Advertising Campaigns.** II; 2 cr. Analysis and construction of typical manufacturers' advertising campaigns. Prerequisite: Political Economy 13 and 15. Mr. Gardner.

30. Commercial Statistics. II; 3 cr. Laboratory course in those parts of statistical method most useful to the business man. Course 130 designed for needs of independent investigator or statistician. Prerequisite: Political Economy 1a. Mr. King, Mr. Leven.

46. Social Origins. Yr.; 2 cr. The origin of man and his institutions. Mr. Gillin.

For Undergraduates and Graduates

101. Advanced Economics. Yr.; 2 cr. Prerequisite: Political Economy 1a. Mr. King.

109a. Commercial Law (Elements). I; 4 cr. Prerequisite: senior standing or consent of instructor. Mr. Gilman.

***In the College of Letters and Science this course may not be counted as a part of the 120 credits required for graduation, except by students in the Course in Commerce.**

****In the College of Letters and Science this course may not be counted as a part of the 120 credits required for graduation, except by students in the Course in Commerce and the Course in Journalism.**

109b. Commercial Law (Corporations). II; 4 cr. Prerequisite: Political Economy 109a. Mr. Gilman.

110. Investments. II; 2 cr. Prerequisites: Political Economy 1a, Political Economy 8a, 8b, and 181 or equivalents, senior standing, and consent of instructor. Mr. Gilman.

122. Labor Problems. I; 3 cr. Prerequisites: Political Economy 1a and 1b or equivalents. Given in alternate years with Political Economy 123. (Given 1917-18.) Mr. Commons.

123. Labor Legislation and Administration. I; 3 cr. Prerequisites: Political Economy 1a and 1b or equivalents. Given in alternate years with Political Economy 122. (Given 1916-17.) Mr. Commons, Mr. Witte.

124. Taxation. II; 3 cr. A study of the general principles of taxation and of tariff, internal revenue, general property, corporation, income, and inheritance taxes in the United States. Prerequisite: Political Economy 1a. Mr. Urdahl.

125. International Commercial Policies. II; 2 cr. Theory of protection and free trade; tariff history of the United States; ship subsidies; commercial treaties. Prerequisite: Political Economy 1a. (Omitted 1916-17.) Mr. Trumbower.

128. Cooperation and Marketing. II; 3 cr. Prerequisite: Political Economy 1a. Mr. Hibbard.

130a. Statistical Method. I; 4 cr., by permission, 3 cr. Laboratory course, adapted to needs of statisticians and investigators in all fields. Prerequisite: Political Economy 1a. Mr. King, Mr. Leven.

130b. Economic Statistics. II; 4 cr., by permission, 2 cr. Lectures on application of statistical method to economic questions with laboratory research problem. Prerequisite: Political Economy 130a. Mr. King.

131. Prices and Cost of Living. II; 2 cr. Price movements and contributing causes. The effects of price changes upon social and economic conditions. Prerequisite: Political Economy 1a. (Omitted 1916-17.) Mr. Hess.

133. Financial History of the United States. II; 3 cr. Prerequisite: Political Economy 5. Given in alternate years with Political Economy 134. (Given 1916-17.) Mr. Scott.

134. The Money Market. II; 3 cr. Operation of the financial machinery of the United States, England, France, and Germany, including currency movements and fluctuations in discount and exchange rates. Prerequisite: Political Economy 5. Given in alter-

nate years with Political Economy 133. (Given in 1917-18.) Mr. Scott.

135. Railway Transportation. I or II; 3 cr. Prerequisite: Political Economy 1a. Mr. Hess, Mr. Eberle, Mr. Vaughan.

136. Railway Rate and Traffic Problems. I or II; 3 cr. Prerequisite: Political Economy 135 or Political Economy 142a. Mr. Hess, Mr. Eberle, Mr. Vaughan.

137. Corporation Finance. I; 3 cr. A study of corporations, corporate securities, and methods of the stock market. Prerequisite: Political Economy 1a. Mr. Urdahl.

138. Insurance Economics. II; 3 cr. This course should precede Mathematics 124. Prerequisite: Political Economy 1a. Mr. Anderson.

139. Social Psychology. I; 3 cr. The social mind and its reaction upon the individual mind. The laws of mob-mind, craze, fashion, conventionality, custom, public opinion, leadership, and innovation. Prerequisite: junior standing. Mr. Ross, Mr. Kiekhof.

140. General Sociology. II; 4 cr. Growth and shifting of population; genesis and life history of groups; social processes and products; ultimate tests of social policies. Prerequisite: Political Economy 1a or senior standing. Mr. Ross, Mr. Kiekhof.

141. Poverty and Relief. I; 3 cr. Extent, causes, and social treatment of poverty and allied problems. Prerequisite: Political Economy 1a or junior standing. Mr. Gillin.

142a. Public Utilities. I; 2 cr. Economic and legal aspects of public service enterprise. Emphasis upon municipal utilities. Prerequisite: Political Economy 1a. Mr. Hess, Mr. Eberle.

142b. Public Utilities. II; 2 cr. Contemporary problems of regulation. Emphasis upon valuation and sphere of public authority. Prerequisite: Political Economy 142a or 135. Mr. Hess, Mr. Dudgeon, Mr. Eberle.

143. Research in Public Utilities. Yr.; 2 cr. Personally directed study of special utility and transportation problems. For graduate students and senior thesis students. Prerequisites: Political Economy 135 and 136; or 142a and 142b or equivalents. Mr. Hess, Mr. Eberle.

145. Labor History and Socialism Prior to 1860. II; 3 cr. Prerequisites: Political Economy 1a and 1b or equivalent. Given in alternate years with Political Economy 146. (Given 1916-17.) Mr. Commons.

146. Labor History and Socialism Since 1860. II; 3 cr. Prerequisites: Political Economy 1a and 1b or equivalent. Given in alternate years with Political Economy 145. (Given 1917-18.) Mr. Commons.

147. Methods of Social Service. II; 2 cr. For those looking forward to social work. Prerequisites: senior standing, Political Economy 1a, Political Economy 141 or equivalent. Mr. Gillin.

150. Senior Seminary. Yr.; 2 cr. Prerequisites: Political Economy 133 and 134 and senior standing. Mr. Scott.

154. Trust Movements. I; 3 cr. Prerequisites: Political Economy 1a and 1b or equivalents. Given in alternate years with Political Economy 155. (Omitted 1916-17.) Mr. Urdahl.

155. Trust Control. I; 3 cr. Prerequisites: Political Economy 1a and 1b or equivalents. Given in alternate years with Political Economy 154. (Omitted 1916-17.) Mr. Urdahl.

161. Criminology and Penology. I; 3 cr. Extent and causes of crime; theory of punishment; treatment and prevention. Prerequisite: Political Economy 1a or junior standing. Mr. Gillin.

181. The Theory and Practice of Accounting. I; 2 cr. Prerequisite: Political Economy 8a, 8b. Mr. Elwell and staff.

182. Cost Accounting. II; 2 cr. Prerequisite: Political Economy 181. Mr. Elwell and staff.

183. Advanced Accounting Problems. I; 2 cr. Prerequisite: Political Economy 181. Mr. Kuechenmeister.

184. Auditing. II; 2 cr. Prerequisite: Political Economy 181. Mr. Kuechenmeister.

185. Analysis of Corporation Reports. Yr.; 1 cr. Prerequisites: Political Economy 1a, Political Economy 8a, 8b, 181, senior standing, and consent of instructor. Mr. Gilman.

186. Accounting Systems. I; 2 cr. Prerequisites: Political Economy 181 and 182. Mr. Elwell.

187. Governmental Accounting. II; 1 cr. Prerequisites: Political Economy 181 and 182. Mr. Elwell.

190. Teachers Course. II; 2 cr.

***195. The Development of Commercial Organizations.** I; 2 cr. Prerequisite: junior standing. Mr. Melville.

***196. Chamber of Commerce Problems.** II; 2 cr. Prerequisite: junior standing. Mr. Melville.

*In the College of Letters and Science this course may not be counted as a part of the 120 credits required for graduation, except by students in the Course in Commerce.

For Graduates

¹200. The Classical Economists. I; 3 cr. Economic environment and doctrines of the mercantilists, physiocrats, Adam Smith, David Ricardo, and John Stuart Mill. Prerequisites: Political Economy 1a and 1b or equivalent. (Given 1916-17.) Mr. Scott.

¹201. Critics of the Classical Economists. I; 3 cr. Economic environment and doctrines of the nationalists, the older historical school, the optimists, and the scientific socialists. Prerequisites: Political Economy 1a and 1b or equivalent. (Given 1917-18.) Mr. Scott.

¹202. The Austrian School and Recent Developments. I; 3 cr. Prerequisites: Political Economy 1a and 1b or equivalent. (Given 1918-19.) Mr. Scott.

²210. Value and Valuation—Legal Theories. Yr.; 2 cr. (Given 1916-17.) Mr. Commons.

²211. Value and Valuation—Economic Theories. Yr.; 2 cr. (Given 1917-18.) Mr. Commons.

²212. Value and Valuation—Administration. Yr.; 2 cr. (Given 1918-19.) Mr. Commons.

²220. Property and Contract; Vested Rights and Personal Conditions—Distribution of Wealth. II; 3 cr. (Given 1917-18.) Mr. Ely.

²221. Landed Property and the Rent of Land—Distribution of Wealth. II; 3 cr. (Given 1916-17.) Mr. Ely.

²222. Custom and Competition—Distribution of Wealth. II; 3 cr. (Given 1916-17.) Mr. Ely.

²223. Monopolies and Trusts—Distribution of Wealth. II; 3 cr. A course intended to lay a foundation for the complete study of "big business." (Given 1918-19.) Mr. Ely.

226. Land Problems—Distribution of Wealth. Yr.; 2 cr. Research course. Mr. Ely, Mr. Taylor, Mr. Hibbard.

238. Seminary in Insurance. Yr.; 2 cr. Prerequisite: Political Economy 1a. Open to graduates and seniors who are writing theses on insurance. Mr. Anderson.

240. Industrial Insurance. Yr.; 2 cr. Mr. Burhop.

255. American Public Finance, Part I. II; 2 cr. The finances of the Federal government. (Omitted 1916-17.)

¹ Courses 200, 201, 202 constitute a three-year cycle, one being given each year.

² Courses 210, 211, 212 constitute a three-year cycle, one being given each year.

³ Courses 220, 221, 222, 223 constitute a four-year cycle, one being given each year.

256. American Public Finance, Part II. II; 2 cr. The finances of the American commonwealths and local political units. (Omitted 1916-17).

257. Principles of Taxation. Yr.; 2 cr. Prerequisite: training in public finance. Mr. Urdahl.

258. Degeneracy and Society. II; 2 cr. Extent and cost of degeneracy and its bearings on social problems; causes and social treatment. Mr. Gillin.

260. Seminary on the Demography and Sociology of Cities. I; 2 cr. (Given 1918-19.) Mr. Ross.

261. Research Seminary. II; 2 cr. The field of investigation selected for 1918 is Social Progress and Regress. Mr. Ross.

262. Seminary on the American Family. I; 2 cr. (Given 1917-18.) Mr. Ross.

263. Seminary on the Dynamics of Population. I; 2 cr. Factors affecting the quantity and quality of population. Natural, social, and artificial selection. Outlines of eugenics. (Given 1916-17.) Mr. Ross.

265. Seminary in Labor and Industry. Yr.; 2 cr. Mr. Commons.

266. General Economics Seminary. Yr.; 2 cr. Prerequisite: one year of graduate work. Mr. Hess et al.

267. Round Table in Economic Theory. Yr.; 2 cr. Prerequisite: one year of graduate work. Mr. Ely.

270. Economic Conference. No credit.

POLITICAL SCIENCE

Emeritus PROFESSOR PARKINSON; PROFESSOR LLOYD JONES (chairman); ASSOCIATE PROFESSORS HALL, OGG; ASSISTANT PROFESSOR HORNBECK; LECTURERS DUDGEON, MCCARTHY, MACGREGOR; INSTRUCTOR CARPENTER; ASSISTANTS NOBLE, SPAHR, YOUNT.

FELLOW, MR. SWENSON.

SCHOLAR, MR. ARMSTRONG.

The work in the Department of Political Science is designed to give a scientific account of the varied activities of the state, and of the methods of determining state action through the electorate and legislative bodies. Some of the courses are designed primarily to

give an understanding of public affairs, and of the rights and duties of citizenship, such as should be comprehended in any liberal education; others are planned to involve more specialized study of methods and problems in the different branches of administration, legislation, and judicial procedure. A number of the courses have practical ends directly in view, in that they aim to provide training in technique or method in certain fields of political action. It is the aim of the department to provide the broadest inductive basis, to train the powers of observation and reason, to develop correct methods of research, and to bring to bear upon the solution of practical problems in the life of the commonwealth and nation the information and facility thus acquired. Certain courses aim to give equipment for the various branches of public service. A special series is arranged with reference to the needs of pre-legal students.

Candidates for the degree of Doctor of Philosophy who are taking their major in the department will be expected to be familiar with the entire field of political science, as treated in the general courses. They should have an intensive knowledge of at least two of the following general divisions of the subject: public administration, public law, world politics, political philosophy, jurisprudence. Every candidate should be thoroughly familiar with American state and federal government, and with the organization and workings of the principal governments of Europe.

The courses primarily for undergraduates are open for election in the sophomore and junior and senior years. Courses 1, 2, 7, and 29 may be taken only for undergraduate credit. Graduate majors are expected to be familiar with the subject matter of courses 1, 2 and 7. Course 7 is repeated each semester and should be taken either precedent to, or along with, any of the following more specialized courses in American government, politics, and law: 13, 29, 108, 111, 112, 114, 116, 117, 122, 126, 127, 130. The minimum requirement for an undergraduate major in political science, in addition to the thesis, is twenty-one semester hours.

For Undergraduates

1. General Political Science. I or II; 3 cr. An introductory course. A general survey of the field and principles of political science, with special reference to the history, the functions and the characteristic machinery of the state. May be taken either precedent to or with other courses. Mr. Hornbeck.

2. Elementary Law. I; 3 cr. A general elective, recommended especially to pre-legal students and others interested in the legal phases of social science. Mr. Hall.

7. Government and Politics in the United States. I or II; 4 cr. An introductory course. Prerequisite for certain courses as indicated above. Mr. Hall, Mr. Carpenter and staff.

13. Municipal Government. II; 3 cr. A general course covering European and American aspects of the subject. Mr. Ogg.

23. American Foreign Service. I; 2 cr. Mr. Lloyd Jones.

25. The Law of the Press. II; 2 cr. Mr. Carpenter.

29. Teachers Course. II; 2 cr. (Omitted 1916-17.)

32. Contemporary Political Topics. II; 2 cr. Designed for students preparing for journalism. Mr. Carpenter.

For Undergraduates and Graduates

108. Administrative Problems. II; 2 cr. (Omitted 1916-17.)

109. Roman Law. I; 3 cr. A knowledge of Latin is not required. Mr. Carpenter.

111. Jurisprudence. II; 3 cr. Open to students who have had an elementary course in law. Mr. Carpenter.

112. American Constitutional Law. II; 3 cr. Mr. Hall.

114. Municipal Functions. II; 2 cr. A comparative study of the leading activities of European and American cities. Lectures, with lantern slides. Mr. MacGregor.

115. Municipal Problems. II; 2 cr. Intensive study of selected topics. Open only to students who have had, or are having, a general course in municipal government. Mr. Ogg.

116. State Administration. II; 3 cr. Includes a brief survey of local government in the United States. Mr. Ogg.

117. Federal Administration in the United States. Historical and Descriptive. I; 3 cr. Mr. Ogg.

118. International Law. I; 3 cr. A general survey of the legal relations between states in times of peace and of war. Mr. Hornbeck.

119. Contemporary International Politics. I or II; 1 cr. May be elected in successive semesters and years. (Lectures. Graduate students are ordinarily expected to attend). Mr. Lloyd Jones, Mr. Hornbeck.

120. Far Eastern Politics. -II; 3 cr. A study of social organization, government and politics in China and in Japan, of the relations of the European powers and the United States to these countries

and to each other in the Pacific, and of problems of world politics which arise out of these relations. Mr. Hornbeck.

121. Colonial Politics. II; 3 cr. An historical and comparative survey. Mr. Ogg.

122. American Party Government. I; 3 cr. Mr. Lloyd Jones.

124. British Self-governing Colonies. I; 3 cr. Mr. Carpenter.

126. The Theory and Practice of Legislation. Yr.; 2 cr. A study of the methods of procedure of legislative bodies and the preparation of the subject matter and form of bills. Mr. Lloyd Jones.

127. European Governments. I; 3 cr. Includes a survey of political parties and of recent political questions. Mr. Ogg.

130. Judicial Administration. I; 2 cr. (Omitted 1916-17.) Mr. Hall.

131. Latin-American Institutions. II; 2 cr. A comparative study of the constitutional and administrative systems of the Latin-American Republics. Mr. Carpenter.

136. American Diplomacy. II; 3 cr. A study of the principal contemporary problems of the United States in foreign affairs; the participation of the United States in the development of International Law. Mr. Lloyd Jones.

137. Modern Internationalism. II; 2 cr. The causes of war and the means of preserving peace; the history and present status of world organization through international law, international arbitration, and international administration; international economic and social solidarity; nationalism and cosmopolitanism; projects for peace and organization. (Omitted 1916-17.) Mr. Hornbeck.

138. Contemporary International Relations. I; 2 cr. Mr. Lloyd Jones, Mr. Hornbeck.

142. Public Utilities. Yr.; 2 cr. A comparison of public regulation and public and private ownership of municipal utilities in American states and foreign countries. Mr. Dudgeon, Mr. Hess.

145. History of Political Thought. I; 3 cr. Mr. Hornbeck.

For Graduates

201. Administrative Law I. I; 2 cr. Officers and elections. A study of the legal nature of public office. Prerequisite: courses 7, 112. Mr. Hall.

202. Administrative Law II. The special law governing administrative authority affecting private rights. Prerequisites: courses 7, 112. Mr. Hall.

203. Administrative Law III. I; 2 cr. The law of taxation. *Goodnow's Cases*. Prerequisite: courses 7, 112. (Omitted 1917-18.) Mr. Hall.

204. Administrative Law IV. II; 2 cr. Municipal corporations. *Beale's Cases*. Prerequisite: courses 7, 112. (Omitted 1917-18.) Mr. Hall.

208. Interstate Commerce Law. II; 2 cr. Prerequisite: course 7. Mr. Hall.

218. International Law as Administered by the Courts. II; 2 cr. A study of international law cases. Mr. Hornbeck.

252. Seminary in Comparative Legislation. Yr.; 2 cr. May be elected by semesters. Prerequisites: courses 7, 112. Mr. Lloyd Jones.

256. Philosophy of the State. II; 2 cr. A critical study of contemporary political thought and terminology. (Omitted 1916-17.) Mr. Hornbeck.

258. Seminary in Administration. II; 2 cr. Prerequisite: courses 116, 117. Mr. Ogg.

259. Seminary in Municipal Problems. I; 2 cr. Prerequisite: course 13. (Omitted 1916-17.) Mr. Ogg.

260. Seminary in International Law and Politics. Yr.; 2 cr. (Omitted 1916-17.) Mr. Hornbeck.

261. Seminary in American Constitutional Law. II; 2 cr. Prerequisites: courses 7, 112. Mr. Hall.

For information concerning groups of studies arranged as special training courses students are invited to communicate with the chairman or the individual professors of the Department of Political Science.

PUBLIC SPEAKING

PROFESSOR O'NEILL (chairman); ACTING ASSOCIATE PROFESSOR GAYLORD; ASSISTANT PROFESSORS BLANTON, HOUGHTON, JOHNSON; ASSISTANTS BALLARD, BOYER, MCCARTHY.

These courses are designed to give preparation in three general lines of work: (a) in argumentation and debate, and the composition and delivery of all kinds of public speeches, (b) in interpretative reading, and dramatic presentation, (c) in voice training and the correction of speech defects. The courses are so arranged as to make possible systematic and progressive study during the sophomore, junior, and senior years. No courses in Public Speaking are open to freshmen.

Attention is called to the system of prerequisites in this department. Four courses only are open to beginners—3a, 12a, 15, and 21.

The University of Wisconsin participates in several intercollegiate contests in oratory and debate, and further opportunity for practice outside of regular courses is to be found in local student activities in drama, oratory, and debate. Students interested in these activities should take the following courses in preparation: for dramatic work, 12, 16, 17; for oratory 15, 5a, 5b, 13; for debate 3a, 11, 15, 8.

Courses 3a, 3b, 5a, 5b, and 11 may be counted toward the English major. Not more than 16 hours of public speaking may be counted toward the bachelor's degree, except as permitted by the provisions of the teaching major. Courses 3a and 3b, listed also as courses in English, are part of the work of this department.

A major can be obtained only as permitted by the provisions of the teaching major. A minor is sixteen credits in selected courses approved by the chairman of the department.

A teaching major may be obtained under the following conditions:

1. It is open only to candidates for the B. A. degree and the University Teachers Certificate who are intending to become teachers of public speaking, and who are definitely accepted by this department as satisfactory candidates for this major.

2. The department requirement is not less than 20 nor more than 24 credits, excluding thesis and departmental teachers courses.

For Undergraduates**COMPOSITION COURSES**

3a. Argumentation. I and II; 3 cr. Lectures, textbook, practice exercises. Open to all students except freshmen. Mr. O'Neill.

3b. Argumentative Addresses. II; 2 cr. Continuation of 3a. Written argument. Prerequisite: course 3a. Mr. O'Neill.

5a. The Composition of Public Addresses. I; 2 cr. Textbooks, models, writing of original speeches of various types. Prerequisites: courses 3b, 11 or 8, or one year in English composition after freshman year. Mr. O'Neill.

5b. Advanced Composition and the History of Oratory. II; 2 cr. Practice in the preparation of formal platform lectures, eulogies, commemorative addresses, etc., based on a survey of the history of oratory. Prerequisite: course 5a. Mr. O'Neill.

COURSES INCLUDING DELIVERY

15. Practical Public Speaking. I and II; 2 cr. Textbook, daily practice in speaking. Attention to voice, pronunciation, gesture, general effectiveness. Open to all students except freshmen. Mr. Houghton, Mr. Gaylord.

8. Extempore Speaking. II; 2 cr. Preparation and delivery. Prerequisite: course 15. Mr. Houghton.

11. Debating. II; 2 cr. Continuation of 3a. Oral argument. Practical work in analysis, evidence, brief drawing, and debating. Prerequisite: course 3a. Mr. O'Neill.

13. Formal Oratory. I; 2 cr. Open only to those who receive the previous assent of the instructor. Prerequisite: course 8 or 11 or 5a. Mr. O'Neill.

INTERPRETATION

12a. Fundamentals of Vocal Expression. I; 3 cr. Theory and practice. Essentials of voice, and coordination of mind, voice, and body. Recommended to those intending to teach literature and reading. Open to all students except freshmen. Miss Johnson, Miss McCarthy.

12b. Continuation of 12a. II; 3 cr. Prerequisite: course 12a. Miss Johnson.

16a. Interpretative Reading. I; 2 cr. Review of 12a and 12b. Study and presentation of various forms of standard litera-

ture. Prerequisite: course 12b, or permission of instructor. Miss Johnson.

16b. Continuation of 16a. II; 2 cr. Prerequisite: course 16a. Miss Johnson.

17. Dramatic Personation. II; 2 cr. Designed for those who show marked dramatic ability, and who wish to specialize in dramatic platform work. Prerequisite: course 16b and permission of instructor. Miss Johnson.

19. Dramatic Production. Lecture, text, laboratory. II; 3 cr. (Alternates with course 17.) Open only to majors and minors in Public Speaking. Miss Johnson.

VOICE TRAINING AND CORRECTION OF SPEECH DEFECTS

21. Voice Training and Phonetics. II; 2 cr. Designed for teachers, especially those majoring in Public Speaking or English. Open to others by permission of the instructor. Mr. Blanton.

25. Correction of Speech Defects. II; 2 cr. Training in diagnosis and correction of such disorders of speech as occur in school children. Prerequisite: course 21. Mr. Blanton.

Speech Clinic. Throughout the university year. Free to all students. Expert guidance and assistance in the eradication of voice and speech defects of all kinds. Open fifteen to eighteen hours a week, so arranged as to make it possible for any student to get whatever treatment is needed. Mr. Blanton.

For Undergraduates and Graduates

118a. Teachers Problems in Reading and Dramatics. I; 2 cr. Open only to graduates and undergraduate majors and minors in Public Speaking in their senior year. Miss Johnson.

118b. Teachers Problems in Speech-making and Debate. II; 2 cr. Open only to graduates and undergraduate majors and minors in Public Speaking in their senior year. Mr. O'Neill.

125. Correction in Speech Defects. II; 3 cr. Mr. Blanton.

141. Psychology of Reading and Speaking. I; 3 cr. Mr. Gaylord.

For Graduates

201. Seminary in Voice and Speech. Yr.; 2 hrs. Mr. Blanton.

205. Seminary in Rhetoric and Oratory. Yr.; 2 hrs. Mr. O'Neill.

ROMANCE LANGUAGES

Emeritus PROFESSOR OWEN; PROFESSORS SMITH (chairman), GIESE; ASSOCIATE PROFESSOR CERF; ASSISTANT PROFESSORS COOL, ERNST, GAY, MICHELL, MILLER, REED, SCHLATTER, ZDANOWICZ; INSTRUCTORS COUSINS, GALLAND, GREENLEAF, C. H., GREENLEAF, J. H., HAMILTON, LEBERT, LYON, SILVERCRUYS; ASSISTANTS BRADLEY, CANTU, CONRAD, KINNE, ORTEGA, PLUNKETT. FELLOW, MR. JENKINS. SCHOLAR, MISS COMSTOCK.

French courses numbered below 10 are for students who have had no French, or who have had less than two years in the high school. Students with only one year of high school French, or its equivalent, should enter course 1b.

Courses 10-18 are for students who have had one year of college French, or two years of high school French. Students who have had more than two years of high school French should consult with the department concerning the course to enter.

All courses above 19 require at least French 10, or an equivalent course as prerequisite. Students entering these courses with the minimum prerequisite are advised to begin, if possible, with 21, 23, 37, or 39. For such students, other suitable courses which may be taken in addition to the above, or alone, are 20, 124, 126, and 127.

Students with the minimum prerequisite should consult the instructor before entering 122, 128, 131, 132, or 136. These are intended primarily for students who have already taken one course above French 19.

Graduates who take 21, 23, 37 or 39 are required to do additional work to receive full credit.

All courses in the 200 group are for graduates, but some may be taken by unusually well prepared undergraduates.

Courses marked C and E are intended for Commerce and Engineering students. Similar courses are given for students of the College of Letters and Science, who will not be allowed to take Commerce and Engineering courses except by special permission of the chairman of the department.

The insertion of CL after a course number indicates that the course belongs also to Comparative Literature.

Major and Minor

Students are allowed to major in French, Spanish, or Italian, or in a combination of these subjects. In French the student must take at least twenty-four credits in advance of first-year French; in Spanish twenty-two credits in advance of first-year Spanish.

Students desiring to major in Italian, or in a combination of the Romance languages, should consult the department for complete details. In combining these languages the first and second year courses of more than one will not count toward the major, nor are they counted in the maximum forty hours allowed in one subject.

For the requirements for the teachers major and minor in Romance Languages see p. 264.

FRENCH

I. LANGUAGE

For Undergraduates

1a. **Beginning French.** I or II; 4 cr. Mr. Cerf and staff.
1b. **Second Semester French.** I or II; 4 cr. Prerequisite: one semester of college French or its equivalent. Mr. Zdanowicz and staff.

2. **Elementary French.** Yr.; 4 cr. For students who have had four years of Latin and German. Miss Gay.

10. **Second Year French.** Yr.; 3 cr. Prerequisite: one year of college or two years of high school French. Mr. Zdanowicz and staff.

To secure four or five credits French 10 should be combined with French 13, 14, 15, or 16.

11. **Second Year French.** Yr.; 3 cr. Especially devoted to translation from French into English. Mr. Kinne.

12. **Third Semester French.** II; 4 cr. Prerequisite: French 1b. Mr. Zdanowicz and staff.

13. **Rapid Sight-Reading.** Yr.; 1 cr. Except by special permission to be taken only with some other French course. Miss Gay, Mr. Cousins.

14. **French Composition.** Yr.; 1 cr. Supplementary to French 10 or 11; except by special permission, to be taken only with some other French course. Mr. Cerf.

15. **French Conversation.** Yr.; 1 cr. Except by special permission, to be taken only with some other French course. Mr. Cerf and staff.

16. **Conversation and Reading.** Yr.; 1 or 2 cr. Prerequisite: French 15 or its equivalent. Mr. Silvercruys.

18. **French Journalism.** Yr.; 1 cr. in French and 1 cr. in Journalism. For students in the Course in Journalism who have had French 1a and 1b or its equivalent. Mr. Ernst.

20. **Advanced Reading.** Yr.; 2 cr. Continuation of French 11. Mr. Schlatter.

90a. **Theory and Practice of Teaching of French and Spanish.** I; 2 cr. Miss Gay, Mr. Smith.

90b. **Teachers Course.** II; 2 cr. Methods. French pronunciation. Elementary phonetics with special attention to needs of teachers. Mr. Cerf.

6C. **Elementary French.** Yr.; 4 cr. For students in Commerce. Mr. Cousins.

17C. **Second Year French.** Yr.; 3 cr. For students in Commerce. Mr. Cousins.

29C. **Third Year French.** Yr.; 2 cr. For students in Commerce. Mr. Cousins.

30C. **Fourth Year French.** Yr.; 2 cr. For students in Commerce. Mr. Cousins.

For Undergraduates and Graduates

124. **Advanced Composition.** Yr.; 2 cr. Conducted in French. Based on nineteenth century prose authors. Miss Gay.

127. **Advanced Conversation.** Yr.; 2 cr. Open to students who have had two or more years of French, upon consultation with instructor. Mr. Ernst.

II. LITERATURE

For Undergraduates

21. **Elementary Survey.** Yr.; 3 cr. Seventeenth, eighteenth, and nineteenth centuries. Class reading and lectures. Three sections. Mr. Giese, Mr. Michell.

23. **Modern French Drama.** Yr.; 3 cr. Beginning with the Romantic movement. Class reading and lectures. Mr. Smith.

37. **Moliere.** I; 3 cr. (Omitted 1917-18.) Mr. Zdanowicz.

39. **French Drama of the Seventeenth Century.** I; 3 cr. Mr. Zdanowicz.

50CL. Masterpieces of Romance Literature in Translation. Yr.; 2 cr. Mr. Cerf. See Comparative Literature 50.

For Undergraduates and Graduates

122. French Literature of the Nineteenth Century. Yr.; 2 cr. Conducted mainly in French. Mr. Giese.

125. Contemporary French Literature. Yr.; 3 cr. First semester, novel and short story; second semester, the drama. Conducted in French. Mr. Ernst.

126. French Poetry. II; 3 cr. From the sixteenth century to the present day. Follows French 133. Conducted in French. (Omitted 1917-18.) Mr. Silvercruys.

128. French Prose Writers of the Seventeenth Century. I; 3 cr. (Omitted 1917-18.) Mr. Cerf.

131. General Survey of French Literature. Yr.; 3 cr. Mr. Reed.

132. French Literature of the Eighteenth Century. II; 3 cr. Mr. Cerf.

133. Victor Hugo. I; 3 cr. Dramas, novels, poems. Followed by French 126. Conducted in French. (Omitted 1917-18.) Mr. Ernst.

136. The French Novel. Yr.; 2 cr. (Omitted 1917-18.) Mr. Hamilton.

100. Thesis Course. Yr.; 2 cr. Open only to seniors and graduates. Mr. Giese.

For Graduates

I. LANGUAGE

240. Old French. Yr.; 2. An introductory course. Mr. Schlatter.

244. Old Provencal. Yr.; 2. Language and literature of the troubadours. Mr. Reed.

249. Chretien de Troyes. Yr.; 2. Prerequisite: French 240 or its equivalent. (Omitted 1917-18.) Miss Gay.

II. LITERATURE

242. Old French Epic Poetry. Yr.; 2. (Omitted 1917-18.) Mr. Smith.

243. Seminary in Old French Literature. Yr.; 2. A general survey of the Brittany Cycle; *Tristan*, Marie de France, and the

Arthurian Romances, including only cursory treatment of Chrétien de Troyes. (Omitted 1917-18.) Mr. Smith.

246. **Seminary in Old French.** Yr.; 2 cr. French paleography, with practice from manuscripts, on the critical text of *Godefroi de Bouillon*. Mr. Smith.

247. **French Literature from Froissart to Rabelais.** Yr.; 2. Miss Gay.

248CL. **Medieval Literature.** Yr.; 2. Beginning of the influence of the French and Provençal literatures. (Omitted 1917-18.) Mr. Reed.

250CL. **The Renaissance in Romance Countries.** Yr.; 2. Mr. Cerf. See Comparative Literature 250.

252CL. **Seminary in Ancient French Drama.** Yr.; 2. Religious and secular drama from the origins to the middle of the sixteenth century. (Omitted 1917-18.) Mr. Smith.

253. **Seminary in French Literature.** Yr.; 2. Classicism. Mr. Giese.

254. **Seminary in French Literature.** Yr.; 2. Romanticism. (Omitted 1917-18.) Mr. Cerf.

ITALIAN

I. LANGUAGE.

For Undergraduates and Graduates

1. **Elementary Italian.** Yr.; 3 cr. Mr. Schlatter.

105. **Italian Conversation.** Yr.; 2 cr. Open to students who have had some work in Italian. Mr. Schlatter.

II. LITERATURE

For Undergraduates and Graduates

102. **Italian Literature.** Yr.; 3 cr. (Omitted 1917-18.) Mr. Schlatter.

160. **Dante.** Yr.; 3 cr. *The Divine Comedy*. Mr. Schlatter.

PORTUGUESE

271. **Portuguese Language and Literature.** II; 2. Mr. Reed.

SPANISH

First and second semester courses in Spanish are numbered below 10. The prerequisite for courses 10-20 is one year of college Spanish or its equivalent. For courses above 20 the prerequisite is two years unless otherwise stated.

Students majoring in Spanish may count Commerce courses toward the major only where permission has been given to take such courses.

The teachers course in French (French 90a) is accepted for the Spanish major, separate review, observation, and practice work being required.

I. LANGUAGE**For Undergraduates**

- 1a. **Beginning Spanish.** I or II; 4 cr. Mr. Reed and staff.
- 1b. **Second Semester Spanish.** I or II; 4 cr. Mr. Cool and staff.

10. **Third Semester Spanish.** II; 4 cr. Prerequisite: Spanish 1b or its equivalent. Mr. Reed.

12. **Second Year Spanish.** Yr.; 3 cr. Prerequisite: Spanish 1b or its equivalent. Three sections. Mr. Cool and staff.

15. **Elementary Conversation.** Yr.; 1 cr. Supplementary to Spanish 12 or 6C. To be taken only in connection with some other Spanish course, except by consent of the instructor. Two sections. Mr. Cantu.

16. **Composition and Conversation.** Yr.; 2 cr. To be taken only in connection with some other Spanish course, except by consent of the instructor. Mr. Lyon.

11. **Spanish Life and Literature.** Yr.; 2 cr. A lecture and reading course conducted in Spanish. Prerequisite: Spanish 12 or 6C or equivalent. Mr. Cool.

2EC. **Elementary Spanish.** Yr.; 4 cr. For students in Commerce and Engineering. Mr. Cool and staff.

6C. **Second Year Commerce.** Yr.; 4 cr. Open to other than Commerce students only by special permission. Mr. Cool and staff.

7C. **Third Year Commerce.** Yr.; 2 cr. Mr. Cool.

8C. **Fourth Year Commerce.** Yr.; 2 cr. Mr. Cool.

II. LITERATURE

For Undergraduates and Graduates

104. *Don Quijote*. Yr.; 3 cr. Prerequisite: two years of Spanish, except by permission of the instructor. Mr. Reed.

105. *Eighteenth and Nineteenth Century Spanish*. Yr.; 3 cr. Prerequisite: Spanish 12 or 6C or equivalent. Mr. Cool.

For Graduates

270. *General Survey*. Yr.; 2. From the origins to the death of Calderón. Mr. Reed.

VULGAR LATIN

272. *Origins of the Lingua Vulgaris*. Yr.; 2. (Omitted 1917-18.) Mr. Reed.

273. *Romance Philology*. Yr.; 2. The differentiation of the *Lingua Vulgaris* into Spanish, Provençal, and Italian. (Omitted 1917-18.) Mr. Reed.

SCANDINAVIAN LANGUAGES

PROFESSOR OLSON (chairman); INSTRUCTOR HOLLANDER.

This department offers instruction in all of the Scandinavian languages (Norwegian, Danish, Swedish, and Old Norse.) From one year's instruction in Modern Norse the student is expected to be able to read both Norwegian and Danish authors. The principal courses are devoted mainly to Norwegian authors, but additional instruction in Danish and Swedish literature is offered to students desiring to pursue these branches beyond the limits of the prescribed courses.

(See Index under Required Studies for linguistic credit.)

LANGUAGE AND LITERATURE

For Undergraduates

1. *Beginners' Norse*. Yr.; 4 cr. Michelet's *First Year Norse*, selections from *Boken om Norge*, Hagene's *Sange*, and Björnson's *En glad Gut*. Primarily for freshmen.

2. Modern Norse. Yr.; 3 cr. Olson's *Grammar and Reader*, Björnson's *Synnöve Solbakken* (Flom's ed.), Holvik's *Second Book in Norse*, Gundersen's *Digte*.

3. Novels and Dramas. Yr.; 2 or 3 cr. Selections from Lie's and Kielland's stories and novels, and Ibsen's modern prose dramas. For 3 cr. an additional hour is given to historical prose (Haereid's *Norges Historie*).

4. Ibsen's Brand and Peer Gynt. Yr.; 2 or 3 cr. For 3 cr. an additional hour is given to the prose dramas.

21. Composition and Conversation. Yr.; 2 cr. Selections from *Boken om Norge*; Aars and Hofgaard's *Retskrivnings-regler*.

5. History of Dano-Norwegian Literature. Yr.; 2 cr. Broch and Seip's *Norsk Litteraturhistorie* and Prestgard's *Norske Kvad*.

60. Swedish. Yr.; 2 cr. Elmquist's *Swedish Grammar*, Selma Lagerlöf's *En herregårdssågen* and *Nils Holgerssons underbara resa* (Elmquist ed.) and *Valda Berättelser* (Mauritzon ed.)

61. Swedish Literature. Yr.; 2 cr. Tegner's *Frithiofs Saga*, Runeberg's *Fänrik Stals Sägner*, Warburg's *Swensk Litteratur historia*. Selma Lagerlöf's *Gösta Berlings Saga* or *Jerusalem* are assigned for outside reading. Designed primarily for students who read modern Norse.

70. Norse Mythology and the Volsunga Saga. I; 1 cr. Lectures; including the relations to the *Nibelungenlied* and Wagner's *Ring des Nibelungen*.

71. Early Scandinavian Literature and Life. I; 1 cr. Lectures, with readings from the sagas in translation.

Courses 70 and 71 are given in alternate years; the latter will be given in 1918.

72. Scandinavian Classics. I; 1 cr. Lectures; Saxo, *The King's Mirror*, Holberg, Oehlenschläger, Tegner, Runeberg, Wergeland.

73. Modern Norse Literature. II; 1 cr. Lectures with readings in translation, with special reference to Ibsen's social dramas.

74. Ibsen's Brand and Peer Gynt. II; 1 cr. Lectures, with readings in translation.

A knowledge of the Scandinavian languages is not required for courses 70, 71, 72, 73, and 74.

For Undergraduates and Graduates

108. Old Norse. Yr.; 2 cr. Norreen's *Abriss der Altisländischen Grammatik*; Holthausen's *Altisländisches Lesebuch*. Mr. Hollander.

118. **Advanced Old Norse.** Njal's Saga; the Edda, selected poems. Mr. Hollander.

102. **Modern Norse.** Yr.; 2 cr. A rapid reading course for graduates who have a good knowledge of other modern languages.

109. **Modern Norwegian Novels and Dramas.** Yr.; 2 cr. Ibsen, Björnson, Lie, and Kielland.

110. **Modern Norwegian Poetry.** I; 1 cr. Wergeland, Welhaven, Munch, Moe, Björnson, and Ibsen.

111. **Norwegian Dialect Writers.** II; 1 cr. Aasen, Vinje, Garborg, and Sivle; the language reform movement.

112. **Scandinavian Literature.** Yr.; 2 cr. A general survey.

SEMITIC LANGUAGES AND HELLENISTIC GREEK

Emeritus PROFESSOR WILLIAMS; ASSISTANT PROFESSORS KELLY, WOLFENSON (chairman).

The general student may gain an acquaintance with the nature of the Semitic peoples and genius from the courses given in English, for which no knowledge of foreign language is necessary, viz., courses 23 and 24 Hebrew History, 26 Geography and Archaeology of Palestine, and 28 Survey of Hebrew Literature.

In addition to instruction in Hebrew and Hellenistic Greek (the original languages of the Bible), courses are offered in Arabic, Aramaic, Assyrian, and Syriac; and should occasion arise, opportunity will be given properly qualified students to prosecute studies in post-biblical Hebrew, Ethiopic, Old Egyptian, and Coptic.

The language work of the department may be begun with Hebrew, Hellenistic Greek, or Arabic.

The various courses of this department are adapted to the needs of:

1. The general student, desiring to extend his culture, or with a view to teaching, by becoming acquainted with this non-Indo-European family of languages giving a view of a little known domain of intellectual development which is of great importance for liberal culture.

2. The intending theological student, or those already in the ministry, since the Semitic peoples furnish materials of the highest importance for theology.

3. The student of comparative religion and of comparative literature.

4. The student of ancient history desiring to come into contact with the earliest monuments and records.
5. The student of linguistics, desiring a view of a most important family of languages, a knowledge of which is essential to a thorough understanding of language processes.
6. The student of Semitic languages, literatures, and history for their own sake.

Language Requirements and Freshmen

Courses of this department regularly open to freshmen are Hebrew 1, 2, 3, 4, and 7. These are counted in satisfaction of foreign language requirements.

Freshmen may begin Hellenistic Greek, but the elementary course counts only as an elective and not for foreign language requirements (see Requirements for the degree of Bachelor of Arts: II. *Required Studies, b. Language*). Courses in advance of the first-year may be substituted to the extent of eight credits. Freshmen who are not prepared to take advanced work may take the elementary (first-year) course in Hellenistic Greek (courses 16 and 17), on condition that they continue with the advanced work thus begun.

Major in Semitic Languages and Hellenistic Greek

The requirements for a major in this department are a minimum of 20 credits, including thesis, made up from any of the courses offered, excepting 1 and 2, 16 and 17, in one or more languages. Elementary work in a second language, however, will not be counted as a part of the 40 credits allowed as a maximum in any one department; and the amount of work required will be subject to increases and variation, depending upon the progress and needs of the individual student.

COURSES GIVEN IN ENGLISH

For Undergraduates

(A knowledge of foreign languages not required.)

23. **Hebrew History to Solomon.** I; 2 cr. Recitations and illustrated lectures. Mr. Wolfenson.
24. **Hebrew and Jewish History.** II; 2 cr. Recitations and illustrated lectures: from the division of the kingdom to the Maccabean period. Mr. Wolfenson.

26. **Historical Geography and Archaeology of Palestine.** Yr.; 1 or 2 cr. Illustrated lectures. Mr. Kelly.

28. **Survey of Hebrew Literature.** II; 2 cr. Mr. Wolfenson.

SEMITIC LANGUAGES

For Undergraduates

1. **Elementary Hebrew.** Yr.; 4 cr. Mr. Wolfenson.

2. **Elementary Hebrew.** Yr.; beginning II; 2 cr. Mr. Kelly.

3. **Second Year Hebrew.** Yr.; 2 cr. Reading course in Hebrew historical literature. Mr. Kelly.

Course 3, with work assigned by the instructor, may be given graduate credit.

7. **Prose Composition and Conversation.** Yr.; 1 or 2 cr. Mr. Kelly.

31. **Elementary Yiddish.** I; 3 cr. A knowledge of German or some acquaintance with spoken Yiddish is prerequisite. Mr. Wolfenson.

32. **Advanced Yiddish.** II; 3 cr. Course 31 or a reading knowledge of Yiddish is prerequisite. Mr. Wolfenson.

For Undergraduates and Graduates

Only a selection of the courses enumerated below is offered in any one year.

104. **Advanced Hebrew.** Yr.; 2 cr. Includes modern Hebrew literature. Mr. Wolfenson.

105. **The Minor Prophets.** Yr.; 2 cr. An advanced course. Mr. Kelly.

106. **The Book of Job.** Yr.; 2 cr. The text; philosophical and ethical problems. Mr. Kelly.

108. **Hebrew Syntax.** Yr.; 2 cr. Mr. Wolfenson.

112. **Elementary Arabic.** Yr.; 2 cr. Mr. Wolfenson.

112a. **Elementary Arabic.** II; 3 cr. For those desiring an opportunity to begin Arabic the second semester. Mr. Wolfenson.

113. **Advanced Arabic.** Yr.; 2 cr. The Qur'ân and history of Islam. Mr. Wolfenson.

114. **Elementary Assyrian.** Yr.; 2 cr. Mr. Kelly.

115. **Talmud.** Yr.; 2 cr. The Aramaic of the Babylonian Talmud. Historical and literary introduction. Mr. Wolfenson.

127. **The Psalms—Books I and II.** Yr.; 2 cr. Hebrew poetry; theories of Hebrew metre. Mr. Kelly.

129. **Biblical Aramaic; Syriac.** Yr.; 2 cr. Mr. Kelly.

For Graduates

209. **Advanced Hebrew Syntax.** I; 2 cr. Mr. Wolfenson.
210. **Advanced Hebrew Etymology.** II; 2 cr. Mr. Wolfenson.
211. **Hebrew Seminary.** Yr. A knowledge of Hellenistic Greek, Latin, German, and French is necessary for the most effective work, but a knowledge of all the languages specified is not indispensable. Mr. Kelly.
230. **Semitic Epigraphy.** Yr.; 2 cr. A study of the north Semitic inscriptions. Mr. Kelly.

HELLENISTIC GREEK**For Undergraduates**

16. **Elementary Hellenistic Greek.** Yr.; 4 cr. For those who have not studied classical Greek. Mr. Kelly.
17. **Elementary Hellenistic Greek.** Yr.; beginning II; 2 cr. This course covers the same ground as 16. Mr. Kelly.
18. **Second Year Hellenistic Greek.** Yr.; 2 cr. Mr. Kelly.

For Undergraduates and Graduates

119. **Advanced Hellenistic Greek.** Yr.; 2 cr. Reading and introduction to critical and literary problems. Mr. Wolfenson.
120. **The Book of John.** Yr.; 2 cr. Textual criticism.

For Graduates

221. **Hellenistic Greek Seminary.** Yr. The Synoptic problem and linguistic characteristics of the Gospels formed the subject in 1915-16. French, German, Latin, and Syriac are necessary for the most effective work. Mr. Wolfenson.
222. **Advanced Hellenistic Greek Grammar.** Yr.; 2 cr.

ZOOLOGY

PROFESSOR GUYER (chairman); **ASSOCIATE PROFESSORS MARSHALL, PEARSE**; **ASSISTANT PROFESSOR WAGNER**; **LECTURER JUDAY**; **INSTRUCTORS LOWE, SMITH**; **ASSISTANTS NELSON, BISHOP, CAHN, WHITE, COLE, FORSTER**.

A minimum of thirty credits is required for a major; besides the thesis this should include:

Zoology 1a and 1b, or Biology 1; Zoology 9, 102a, 104a, and 105. One elementary course in botany is required of those who have not taken Biology 1.

For the advanced courses training in chemistry and ability to read French and German are desirable.

Medical students will find courses 6, 11, 19, 104a, and 105 of special interest.

Agricultural students will find courses 6, 9, 19, 21, and 110 to 113, of special interest.

The new biology building is within easy reach of the various Madison lakes, which are, scientifically, among the best known bodies of fresh water in the world. For years they have been under careful investigation by the State Geological and Biological Survey as well as by various biological departments in the University. The whole body of knowledge accumulated during this time, including carefully prepared charts and maps, is at the service of all who can use it. A zoological substation is located on the shore of Lake Mendota and a launch capable of carrying thirty people is available for outdoor work. With its special laboratories, research rooms, vivaria, and outdoor breeding pools, and its unusually complete equipment and library, the Department of Zoology affords unsurpassed opportunity for laboratory work and research.

For Undergraduates

1a. General Zoology. I; 5 cr. Lectures and laboratory. Courses 1a and 1b, combined, will satisfy the natural science requirement. Mr. Pearse and staff.

1b. Animal Biology. II; 5 cr. The second semester of Biology 1 or of Zoology 1a. Mr. Guyer and staff.

3. Elementary Zoology. II; 3 cr. For agricultural students. Mr. Wagner and staff.

4. **Elementary Embryology.** I; 2 cr. For students of Home Economics. Miss Smith.

6. **Heredity and Eugenics.** I; 2 cr. Mr. Guyer.

9. **Elementary Entomology.** II; 3 cr. Mr. Marshall.

11. **Microscopic Anatomy and Micro-technique.** II; 3 cr. Miss Smith.

19. **Animal Parasites.** II; 3 cr. For medical and agricultural students and those interested in the problems of public health. Veterinary students may take the laboratory work alone for two credits. Mr. Pearse.

20. **The Teaching of Zoology.** II; 2 cr. Mr. Pearse.

21. **Ornithology.** II; 2 cr. Mr. Wagner.

For Undergraduates and Graduates

102a. **Invertebrate Zoology.** I; 5 cr. Mr. Wagner.

104a. **Comparative Anatomy of Vertebrates.** I; 5 cr. Mr. Wagner.

104b. **Vertebrate Zoology.** II; 3 cr. Mr. Wagner.

105. **Elements of Vertebrate Embryology.** I; 2 or 4 cr. Miss Smith.

107. **Evolution Problems.** II; 2 cr. Mr. Guyer.

108. **Physiological Zoology.** II; 4 cr. Prerequisites: course 1 or course 3. Chemistry 1. Mr. Lowe.

110. **Entomology: Anatomy and Embryology.** II; 3 cr. Mr. Marshall.

112. **Economic Entomology.** I; 2 cr. Mr. Marshall.

113. **Forest Entomology.** II; 2 cr. The principal insects injurious to forest and shade trees. Mr. Marshall.

123. **Advanced Entomology.** For students who desire to continue some special line of work. Mr. Marshall.

114. **Anatomy and Physiology of the Cell: Nondevelopmental Phenomena.** I; 2 cr. Mr. Guyer.

115. **The Cell in Development and Inheritance.** II; 2 cr. Mr. Guyer.

116. **Cytology.** A laboratory course. 3 cr. Mr. Guyer.

117. **Animal Ecology and Natural History.** II; 2 cr. (Omitted 1916-17.) Mr. Pearse.

122. **Animal Behavior.** I; 3 cr. Mr. Pearse.

124a. **Limnology.** I; 2 cr. Lectures on the geology, physics, chemistry, and biology of lakes, with special reference to Wisconsin. Mr. Juday.

124b. Plankton Organisms. II; 2 cr. A continuation of course 124a, with field work. Mr. Juday.

For Graduates

220. Seminary. 2 cr. Mr. Guyer.

228. Research.

COURSE IN CHEMISTRY

LOUIS KAHLENBERG, DIRECTOR, Professor of Chemistry.

Purpose of the Course

The primary purpose of this course is to train competent chemists. More good teachers of chemistry in schools and colleges are needed, and in the arts, industries, and public services expert chemists are now required, so that it has become imperative to meet these ever increasing demands. The protection of the public against disease and fraud requires a chemical examination of water, food stuffs, and the materials that enter into clothing, buildings, and other structures. Both the raw materials and the finished products need careful inspection, and in many cases the various steps in the processes of modern manufacture require the guidance of a chemist to insure economy.

It is not the purpose of this course to prepare chemists for each individual industry, for no educational preparation can take the place of the special practical experience required to become proficient in any particular line of work. The aim is rather to give the student training in the fundamental principles of chemistry and the cognate sciences, which, of course, also necessitates a proper grounding in French and German. With this preparation a chemist will readily be able to adapt himself to any special industry with which he may later be connected.

In all fields the demand for chemists still exceeds the supply. Furthermore, not only in teaching chemistry in high schools and colleges, but also in lines like analytical, physiological, sanitary, and food chemistry, there is a growing field for women as well as for men.

Requirements for Admission

Students will be admitted to this course on compliance with the conditions imposed for entrance to the College of Letters and Science. See Index under Admission.

Persons twenty-one years of age who are not candidates for a degree and who wish to take special studies are permitted to enter as adult special students upon giving satisfactory evidence that they are prepared to profit by the course desired.

Students who have satisfied all the requirements for entrance, but do not wish to be candidates for a degree, will be admitted to any of the studies of this course for which they are properly prepared.

Plan of the Course of Study

Six courses of study have been outlined: a general course, a course for industrial chemist, a course for agricultural chemist, a course for soil chemist, a course for physiological chemist, and a course for food chemist. The last course is also well adapted for those fitting themselves for sanitary work in hygienic laboratories. The first two courses are almost free from biological work, containing only a short course in bacteriology, which it is extremely desirable that every chemist should have. The general course is intended for those desiring to become analytical chemists and those who prefer a course relatively free from biological studies and work which is strictly applied in character. The other four courses are primarily distinguished from the first two in that they contain a considerable amount of biology and consequently present a more limited opportunity for further work in other lines.

It will be observed that differentiation in the various lines begins in the second year of the general course. In all the courses, general inorganic, analytical, organic, and physical chemistry are required, and also physics, trigonometry, and analytical geometry or a short course in mechanical drawing. The English is the regular course required of all freshmen in the College of Letters and Science. Both German and French are required. These languages must be pursued in not less than one-year courses. A student coming prepared in but one of these languages would naturally continue work in that language during the freshman year. The equivalent of at least courses 2a and 2b in German and courses 1a and 1b in French is required for graduation. Preparatory work in these languages may satisfy the graduation requirement entirely or in part. The special

courses required in connection with each of the six courses are selected because they are of a nature to fit the student for the definite end in view. Each course contains a certain number of free electives, and while freedom of election is not restricted, the student is strongly urged to choose his electives from subjects outside of the natural sciences.

In each of the courses, 130 unit-hours and an equal number of grade points are required for graduation. (See p. 81 for details concerning grade points.) As the work outlined is necessarily difficult in character, students would often find it advantageous to absolve a part of the required studies during one or more summer sessions.

Requirement for Graduation

Students who have successfully completed any of the courses of study will be admitted to graduation from the University, and will receive the degree of Bachelor of Science.

Course of Study

All Courses

Freshman year. *Both semesters:* Chemistry 1, 5 cr.; Mathematics, 1, 3 cr.; German or French, 4 cr.; English, 3 cr. *Second semester:* Mathematics 2, 3 cr. takes the place of Mathematics 1.

General Course

Sophomore year. *First semester:* Chemistry 11, 5 cr.; German or French 4 cr.; Physics 1Sc., 5 cr.; Mathematics 5, or Geology 7, 3 cr. *Second semester:* Mathematics 3 or 5, or Bacteriology 1, 3 cr. Drawing 1 or 2, 3 cr. may be substituted for Mathematics 3 or 5, 3 cr.

Junior year. *Both semesters:* Chemistry 120, 5 cr.; Chemistry 130, (I), 5 cr.; German or French, 4 cr.; Electives, 3 to 9 cr.

Students who took Mathematics 5 in sophomore year must take Geology 7, 3 cr. in the first semester and Bacteriology 1, 3 cr. in the second semester, which leaves them but one hour as elective for each semester.

Senior year. *First semester:* Thesis, 2 cr.; Chemistry 113, 1 cr.; Chemistry 114, 1 cr.; Chemistry 119, 3 cr.; Chemistry 107, 1 cr.; Electives, 9 cr. *Second semester:* Thesis 2 cr.; Chemistry 107, 1 cr.; Chemistry (elective), 5 cr.; Assaying 121, 2 cr.; Electives, 9 cr.

Course for Industrial Chemist

Sophomore year. *First semester:* Chemistry 11, 5 cr.; German or French 4 cr.; Physics 1Sc., 5 cr.; Mathematics 5 or Geology 7, 3 cr. *Second semester:* Mathematics 5 or Bacteriology 1, 3 cr.; Drawing 1 or 2, 3 cr., may be substituted for Mathematics 3 or 5, 3 cr.

Junior year. *Both semesters:* Chemistry 120, 5 cr.; Chemistry 130, (I) 5 cr.; German or French, 4 cr.; Chemical Engineering 12a (I) or (II), 2 cr.; Chemical Engineering, 111, (II), 2 cr.; Electives, 3 to 8 cr.

Senior year. *First semester:* Thesis, 2 cr.; Chemistry 113, 1 cr.; Chemistry 119, 3 cr.; Chemical Engineering 15, 2 cr.; Chemistry 107, 1 cr.; Chemical Engineering 114a, 4 cr.; Electives, 4 cr. *Second semester:* Thesis, 2 cr.; Assaying 121, 2 cr.; Chemical Engineering 111, 2 cr.; Bacteriology 1, 3 cr.; Chemistry 107, 1 cr.; Electives, 7 cr.

Course for Agricultural Chemist

Sophomore year. *Both semesters:* Chemistry 11, 4 cr.; German or French, 4 cr.; Biology 1, 5 cr.; Physics 1Sc., 5 cr.

Junior year. *First semester:* Chemistry 120, 5 cr.; German or French, 4 cr.; Electives, 8 cr. *Second semester:* Chemistry 120, 5 cr.; German or French, 4 cr.; Agricultural Chemistry 1, 5 cr.; Agricultural Bacteriology 1, 3 cr.

Senior year. *First semester:* Thesis, 2 cr.; Chemistry 130, 5 cr.; Agricultural Chemistry (electives), 5 cr.; Electives, 5 cr. *Second semester:* Soils 1, 5 cr.; Thesis, 2 cr.; Agricultural Chemistry (electives), 3 cr.; Electives, 7 cr.

Course for Soil Chemist

Sophomore year. *First semester:* Chemistry 11, 5 cr.; German or French, 4 cr.; Physics 1Sc., 5 cr.; Geology 7, 3 cr. *Second semester:* Chemistry 11, 5 cr.; Soils 1, 5 cr.; Physics 1Sc., 5 cr.; Electives, 2 or 3 cr.

Junior year. *First semester:* German or French, 4 cr.; Chemistry 120, 5 cr.; Soil Analysis 121, 5 cr.; Electives, 3 cr. *Second semester:* German or French, 4 cr.; Chemistry 120, 5 cr.; Bacteriology 1, 3 cr.; Electives, 5 cr.

Senior year. *First semester:* Thesis, 2 cr.; Chemistry 130, 5 cr.; Chemistry 107, 1 cr.; Geology 1, 5 cr.; Electives, 4 cr. *Second semester:* Thesis, 2 cr.; Soils (electives), 2 to 5 cr.; Agricultural

Chemistry (electives), 5 cr.; Chemistry 107, 1 cr.; Electives, 4 to 7 cr.

Course for Physiological Chemist

Sophomore year. Same as for agricultural chemist.

Junior year. *First semester:* German or French, 4 cr.; Chemistry 120, 5 cr.; Physiology 1, 3 cr.; Chemistry 130, 5 cr. *Second semester:* German or French, 4 cr.; Chemistry 120, 5 cr.; Physiological Chemistry 104, 4 cr.; Electives, 4 cr.

Senior year. *First semester:* Thesis, 2 cr.; Physiological Chemistry 117, 4 cr.; Toxicology, 101, 102, 2 cr.; Physiological Chemistry 100, 2 cr.; Electives, 4 cr. *Second semester:* Bacteriology 1, 5 cr.; Physiological Chemistry 120, 1 cr.; Botany 111, 3 cr.; Chemistry 156, 5 cr.; Thesis, 2 cr.; Electives, 3 cr.

Course for Sanitary Chemist or Food Chemist

Sophomore year. Same as for agricultural chemist except that in the second semester Biology 1 is replaced by Bacteriology 1, 5 cr.

Junior year. *First semester:* German or French, 4 cr.; Chemistry 120, 5 cr.; Botany 110, 3 cr.; Chemistry 130, 5 cr. *Second semester:* German or French, 4 cr.; Chemistry 120, 5 cr.; Botany 133, 3 cr.; Chemistry 146, 5 cr.

Senior year. *First semester:* Thesis, 2 cr.; Chemistry 113, 1 cr.; Chemistry 114, 1 cr.; Chemistry 119, 3 cr.; Chemistry 107, 1 cr.; Electives, 7 cr. *Second semester:* Thesis, 2 cr.; Toxicology 101, 1 cr.; Toxicology 102, 1 cr.; Chemistry 107, 1 cr.; Physiological Chemistry 104, 4 cr.; Electives, 8 cr.

Departments of Instruction

For detailed information regarding the preceding courses, see the announcements of the several departments of the College of Letters and Science; College of Agriculture; Mechanical Drawing, College of Engineering; Toxicology, Medical School.

Laboratories

A description of the various scientific laboratories of the University may be found by referring to the Index.

Libraries

For detailed information concerning general library facilities see Index. The various scientific departments have reference libraries in connection with the laboratories. These departmental libraries contain those books and periodicals which are most frequently used. In chemistry and allied sciences the University offers excellent library facilities.

Charges and Fees

For the fees to be paid in this course and in the various scientific laboratories see chapter on General Information under Fees, and the announcements of the several departments.

COURSE IN COMMERCE

W. A. Scott, Director, Professor of Political Economy.

Requirements for Admission

Students will be admitted to this course on compliance with the conditions imposed for entrance to the College of Letters and Science. (See Index under Entrance Requirements.)

Students not candidates for degrees will be admitted to special courses, provided they have had, or first pursue, the studies prescribed as preliminary for such courses. In most cases the work prescribed for the freshman year, with one or two modifications, will be included in such preliminary studies.

General Requirements

A total of 132 credits and 132 grade points (see p. 81), exclusive of credits required in Physical Education and Drill, is required for graduation in this course. The prescribed distribution of these by semesters is indicated under Arrangement of Studies, p. 234. Without special permission of the Dean no student may take courses aggregating fewer than 14 credits per semester. In case a student has received grades of good in all studies of the preceding semester, he may take extra studies to an amount not exceeding 18 credits.

No student will be permitted to receive more than 18 credits towards graduation in one semester in classroom work except by permission of the Faculty, obtained in advance.

Plan of the Course of Study

The studies of the course may be classified under the following heads:

Preliminary Studies

To this group belong the studies which are regarded as essential in a liberal education and as a necessary foundation for more specialized subjects to be pursued later on. They comprise courses in natural science, mathematics, English, foreign languages, history, and economics. In natural science, physical geography and the physiography of the United States are required as a basis for economic geography, upon which in turn are built several specialized courses in applied economics. In addition students elect a year's course in natural science. The course in English is the general training course required of all freshmen in the University. Two modern foreign languages are also required. In these courses special attention is devoted to the acquisition of a speaking and writing command of the language for commercial purposes. Economics and history reveal the forces which produce changes in commercial conditions and institutions and the laws of such changes. The courses prescribed along these lines are the economic and social history of England, the elements of political economy, money and banking, and transportation.

Professional Studies

The aim of these is to teach students to understand and actually to perform the various processes common to all branches of commerce. They comprise commercial correspondence, business forms and documents, accounting, auditing, salesmanship, advertising, credits and collections, and marketing methods. In these courses the study of general principles is always accompanied by practice work in a well equipped laboratory.

This group of studies is distributed throughout the course, beginning with the sophomore year. It is so correlated with the other lines of work as to receive reinforcement from them and to furnish constant tests of their efficiency.

Elective Studies

Besides the two classes of studies described above, which are with few exceptions prescribed, each student is obliged to elect a group of related courses and a sufficient number of other courses to complete the minimum prescribed for a bachelor's degree. These groups must be arranged at the beginning of the junior year on consultation with a member of the staff, and are designed to give the student an opportunity to study intensively a particular field and to learn how to collect and to utilize data bearing upon the problems of commerce and industry. His attainments in this direction are tested by a thesis prepared during the senior year. Among the fields available for group work and thesis writing are banking and finance, accounting, transportation and public utilities, commercial secretarial work, advertising and salesmanship, insurance, commercial teaching and real estate.

Approximately one-half of the student's time in the junior and senior years is available for free election from the great variety of courses offered in the various colleges and departments of the University. The opportunity here presented may be utilized to broaden the student's outlook into fields of knowledge not covered by the requirements of his course or to supplement the studies already pursued.

ARRANGEMENT OF STUDIES

Freshman Year

Physical Geography, I, 3 cr.; Economic Geography, II, 3 cr.; Foreign Language, 8; English, 6; Mathematics, 6; History, 6; Gymnastics and Drill.

Sophomore Year

Commercial Correspondence, I, 2 cr.; Foreign Language (if not completed in freshman year) 4 or 8; Natural Science, 10; Elementary Economics, I, 4 cr.; Money and Banking, II, 3 cr.; Elements of Accounting, 4; Free Electives, 0 to 8; Gymnastics and Drill.

Junior Year

Transportation, I, 3 cr.; Theory and Practice of Accounting, I, 2 cr.; Business Administration, 4; Elective Group, 6-10; Free Electives, 15 to 19.

Senior Year

Commercial Law, 8; Elective Groups, 10-14; Free Electives, 12-16.

ELECTIVE GROUPS***Banking and Finance**

Financial History of the U. S., 3; Money Market, 3; Corporation Finance, 3; Investments, 2; Public Finance, 3; Thesis, 4.

Accounting

Advanced Accounting Problems, 2; Auditing, 2; Analysis of Corporation Reports, 2; Cost Accounting, 2; Accounting Systems, 2; Governmental Accounting, 1; Corporation Finance, 3; Investments, 2; Statistics, 3; Thesis, 4.

Transportation and Public Utilities

Railway Rate and Traffic Problems, 3; Public Utilities, 2; Corporation Finance, 3; Statistics, 3; Government and Politics of the U. S., 3; Thesis, 4.

Commercial Secretary

Municipal Functions, 3; Municipal Government in the U. S., 3; Government and Politics of the U. S., 3; Statistics, 3; Commercial Organizations, 2; Problems and Methods of Commercial Organizations, 2; City Planning, 2; Thesis, 4.

Insurance

Mathematics (124), 3; Insurance Economics, 3; Seminary in Insurance, 2; Industrial Insurance, 2; Statistics, 3 or 4; Corporation Finance, 3; Investments, 2; Thesis, 4.

Commercial Teachers

Education, 17 (requirements for a teachers certificate); Advanced Accounting Problems, 2; Auditing, 2; Business Administration, 2; Thesis, 4.

*The number, titles and arrangement of courses given below are suggestive only. They may be modified to suit the needs of individual students and other groups may be arranged.

Real Estate

Marketing Methods, 2; Sales Administration, 2; General Advertising, 2; Commercial Statistics, 2; Taxation, 3; Investments, 2; City Planning, 4; Thesis, 4.

For detailed information with regard to the foregoing courses of instruction see the announcements of the several departments of the College of Letters and Science.

Requirements for Graduation

Students who have successfully completed the above course of study will be admitted to graduation and will receive the degree of Bachelor of Arts.

Graduate Students

Graduates of this or other colleges and universities of good standing will be admitted to this course, and arrangements will be made so that they may take its peculiar studies in two years or in less time, provided they have already pursued some of them in their undergraduate courses.

Preparation for Teachers

Students who wish to prepare themselves for teaching are advised to take the commercial teachers group described on p. 235 which includes the courses prescribed for the teachers license in this state and given by the Department of Education, and courses in accounting and business administration in addition to those required of all students in the Course in Commerce. Facilities for pedagogical practice will be given such students in the accounting laboratories.

Special Lectures

Special lectures are provided from time to time for the purpose of acquainting students with present business conditions and opportunities. As far as possible men representing the chief business enterprises of the United States are secured for this purpose.

COURSE IN JOURNALISM

Willard G. Bleyer, Chairman, Professor of Journalism.

Purpose and Plan of the Course

The studies included in the Course in Journalism are of three kinds: (1) those designed to familiarize the student with present social, political, and economic conditions in the light of their origin and development, as well as with the literature of his own and other languages; (2) those designed to develop the student's power of expressing his ideas effectively in writing; (3) those intended to give the necessary technical instruction in the methods of journalism and advertising. The course of study has been arranged in the belief that the greater part of the time should be devoted to a study of the subjects of the first group, such as history, political science, economics, sociology, philosophy, psychology, language, and literature, which are fundamental to journalistic work. Instruction in the principles of effective written expression and practice in writing are given by the courses in English composition and journalism.

The technical work includes courses in newspaper writing of the several kinds and in newspaper editing, with a consideration of the methods of practical journalism, the history of the American press, and a study of the organization and the management of a modern newspaper. Courses are offered in the psychological principles of advertising and in the principles and the methods of newspaper advertising. Representative German and French newspapers are studied in special courses for Journalism students, given by the German and Romance Language Departments.

Instruction is also given in the law of the press, including the law of copyright, literary property, libel, privileged publication, and other topics relating to the publication of books and newspapers. In connection with the courses in newspaper work special lectures on various phases of journalistic work are given by newspaper men in active service.

Additional information is given in the bulletin, "Course in Journalism, 1917-18," which may be had on application to the chairman.

Technical and Trade Journalism

Although the Course in Journalism has been arranged primarily for those preparing for newspaper and magazine work, provision has also been made for those interested in technical and class journalism. The courses in newspaper and magazine work may be elected by students in the professional schools and courses. Students in the Course in Journalism may elect courses in the College of Mechanics and Engineering, the Law School, and the College of Agriculture, as well as in the Course in Pharmacy and the Course in Commerce in the College of Letters and Science. By combining studies in commerce, agriculture, engineering and other technical subjects with those outlined in the Course in Journalism, students can obtain the necessary preparation for practically all lines of technical and trade journalism.

Courses in agricultural journalism are given in the College of Agriculture for those who desire special training of that kind.

Laboratory Equipment

A newspaper office with typewriters, files, indexes, and reference books is maintained as a laboratory for the students of Journalism. Index and filing cases show methods of preserving photographs, illustrations, clippings, and biographical and statistical material. Several thousand well written newspaper "stories," taken from well edited papers, and over a thousand special features and magazine articles are classified according to subject matter and treatment so that they may be used readily by the students. A large collection of typical foreign newspapers including many representative ones from the countries of Europe as well as some from India, China, Japan, Ceylon, Burma, South Africa, Central America, Mexico, Cuba, and the Philippines, serves as a basis for the study of comparative journalism.

A reading room and a seminary room are also provided with files of the leading newspapers of the country, as well as of important American and English journalistic periodicals.

Practical Experience

Students in the Course in Journalism are given practical training on the two Madison daily newspapers, the editors of which cooperate with the instructors in journalism for this purpose. Places on the

editorial and the business staffs of student publications are awarded for the most part on a basis of literary and executive ability, and are open to all students. The *Daily Cardinal*, published as a morning newspaper, is edited by a staff organized from the students interested in journalism, who thus get practice in all the details of newspaper making. The *Wisconsin Literary Magazine*, a monthly devoted to feature articles, short stories, verse, and essays; the *Awk*, a humorous monthly; and the *Badger*, the university annual edited and published by the members of the junior class, all give opportunity for a variety of experience in journalism. The *Wisconsin Engineer*, a quarterly edited and published by the students of the College of Engineering; and the *Wisconsin Country Magazine*, a bi-monthly edited and managed by the agricultural students; and the *Wisconsin Commercial Magazine*, a monthly issued by the university Commerce Club, furnish practice for those interested in technical and trade journalism.

General Requirements

Students will be admitted to these courses on compliance with the conditions imposed for entrance to the College of Letters and Science. (See Index under Requirements for Entrance.)

Persons over twenty-one years of age who are not candidates for a degree, and who wish to take special studies, are permitted to enter as adult special students upon giving satisfactory evidence that they are prepared to profit by the courses desired.

Students who have satisfied all the requirements for entrance but do not wish to be candidates for a degree will be admitted to any of the courses for which they are properly prepared.

For the requirements of the degree of Bachelor of Arts, see Index.

Arrangement of Courses

The Course in Journalism consists partly of required courses and partly of elective ones. The required courses include three groups: (1) those studies required of all students in the College of Letters and Science who are candidates for the degree of Bachelor of Arts, such as Freshman English, history, foreign languages, and science or mathematics; (2) those that are prerequisite for advanced work in the fields with which journalism is especially concerned, such as the general survey of English literature, American history, elementary political economy, elementary law, and government

and politics in the United States; (3) those that give the necessary technical instruction and practice in journalism, including those in advertising and the law of the press. The elective studies include those courses in history, political science, political economy, literature, and philosophy that are essential for the best type of journalism.

The following list contains the required and elective courses arranged under the four years in the order in which they should normally be taken. The numbers in parentheses are the number of the course in the department; Arabic figures following the parentheses indicate the credits; Roman numerals show the semester in which the course is given.

Freshman Year

General Survey of Journalism (Journalism 1), 0; Freshman English (1a and 1b), 3; Foreign Language, 4; English History (5), 3; Medieval History (1a and 1b), 3; Mathematics, 3, or Science, 5.

Sophomore Year

Newspaper Reporting and Correspondence (Journalism 2), 3; Journalistic German (11), 1; Psychology of Advertising (119), 2, II; General Survey of English Literature (30), 3; History of the United States (4), 3; Elements of Economics (1), 4, I, II; Elements of Money and Banking (5), 3; General Political Science (1), 3, I; Foreign Language, 4, Free Hand and Applied Drawing (Manual Arts 51), 3.

Junior Year

Newspaper Editing (Journalism 3), 2; Special Feature and Magazine Writing (Journalism 105), 2; Journalistic French (18), 2; Newspaper Advertising (Political Economy 15), 2, I; Law of the Press (Political Science 25), 2, II; American Literature (40), 2; Argumentation (Public Speaking 3a), 3, I; Modern European History (2), 3; The British Empire Since 1688 (136), 2; Elementary Law (2), 3, I; Government and Politics in the United States (7), 2, II; International Law (118), 2; Party Government (122), 3, I; Poverty and Relief (141), 3, II; Labor Problems (123), 2, II; Social Psychology (139), 3, I; Elements of Public Finance (3), 3, I; Problems of Taxation (124), 2, II; History of New England (113), 3, II; Psychology (1), 3, I; Ethics (41), 3, II; History of Modern Philosophy (32), 3, II; Logic (11), 2, II.

Senior Year

Editorial Writing (Journalism 104), 2; History and Principles of Journalism (Journalism 110), 2; The Country Newspaper (Journalism 8), 2, II; Thesis, 2; History of the West (111), 3; Nineteenth Century Europe (139), 3, II; Diplomatic History of the United States (115), 2; History of Europe and Asia (148), 2; Social and Economic Statistics (130), 3; Transportation and Communication (135), 3, II; Financial History of the United States (133), 3, I; The Money Market (134a), 3, I; Industrial Evolution and Its Problems (120), 2, I; Administrative Problems (108), 2, I; 1, II; Theory and Practice of Legislation (126), 3; Oriental Politics and Civilization (120), 3, II; Municipal Government in Europe and the United States (115), 3, II; Contemporary International Politics (19), 1; Social, Political, and Business Ethics (42), 2; Philosophic Thought in Nineteenth Century English Literature (153), 2, II; Abnormal Psychology (107), 2, II; Modern Drama (107), 2; Modern Novel (108) 2; Victorian Prose Writers (54), 2; The Victorian Era (35), 3; Current Political Topics (32), 2.

COURSE IN PHARMACY

EDWARD KREMERS, Director, Professor of Pharmaceutical Chemistry.

Object of the Course

The prime object of the Course in Pharmacy is to furnish a thoroughly scientific foundation for the pursuit of the profession of pharmacy. The elements of the fundamental natural sciences, chemistry, botany, and physics, must first be studied before their application to pharmacy can rationally be considered. This is as true for pharmacy as for any other applied science or art. In pursuing these general studies the pharmacy students have the advantage of close association with students from other courses. This implies that in these studies they must be able to keep abreast of students who are graduates of accredited high schools. The preparation for college, therefore, which the prospective pharmacy student should seek is not that of the shops, but that of a good high school or academy of like rank. The University does not demand

practical experience for admission to the courses in Pharmacy, but desires such preparation as will best fit for college or university work.

The general study of these fundamental sciences is followed by more or less specialized courses. General chemistry, inorganic and organic, qualitative and quantitative analysis are followed by pharmaceutical chemistry, and applied chemical analysis; general botany by vegetable histology and anatomy of drugs; general physics by pharmaceutical technique. These somewhat specialized studies, in turn, not only lay the foundation for the study of the more strictly applied courses in practical pharmacy and pharmacognosy, but also prepare the student for thesis work.

The student who can spend only two years at the University is compelled to take up the more technical studies of his course before he has laid a satisfactory foundation. Such a compromise is outlined under the caption, Courses of Study. The three-year student, as a rule, finds time to pursue other studies besides those outlined above, e. g., German, physiology, bacteriology, etc. The four-year student has the great advantage of supplementing his high school preparation during the freshman and sophomore years by acquiring a reading knowledge of German and French, and by the study of university mathematics, all of which studies are of the greatest importance when the more advanced work of the natural sciences is taken up during the junior and senior years.

Special attention is called to the Four-year Course offered to graduates of accredited high schools. This course was created in order to accommodate those students who desire to obtain a general scientific education and to include in their course the pharmaceutical studies, and with the hope of stimulating a broader pharmaceutical education. For the more applied courses special laboratories have been equipped.

Like the sister profession, medicine, pharmacy is in need, not only of the general practitioner, but also of the specialist. For the preparation necessary to equip such specialists the University offers graduate courses. Graduates who desire to prepare themselves as chemists for manufacturing establishments, as analytical, food, or sanitary chemists, or as bacteriologists, will find that the graduate work in the Course in Pharmacy, as well as the other departments of the University, offers excellent opportunities for advanced and more specialized study. Special lines of research can also be pursued in various departments by those who desire to work for a higher degree. The attention of advanced students is especially called to the graduate work. (See Index.)

Laboratories

The pharmaceutical laboratories are located on the third and fourth floors of the new wing of the Chemistry Building. They consist of a dispensary, a laboratory for analytical purposes, and a laboratory for general pharmaceutical chemistry on the third floor. On the fourth floor there are a milling room and laboratories for extraction and distilling purposes equipped with steam and vacuum apparatus. The work of these laboratories is carefully coordinated and culminates in the prescription work of the dispensary.

Collections

The collections of the University, including the drug cabinet, are described elsewhere. See Index under Collections.

Libraries

For a statement as to general library facilities at the University and in the city of Madison, see Index under Library. The department library for ready reference is now housed in the library of the new Chemistry Building, a large, well lighted and equipped room on the third floor, unusually well supplied with reference works and the best periodicals. The other department libraries, as well as the general library, are all on the same campus and, therefore, easy of access.

By the will of the late Mrs. Hollister, the sum of \$12,000 has been turned over to the State Historical Society for the endowment of a Pharmaceutical Library. The Historical Society will make no attempt to duplicate the pharmaceutical section of the University Library, but will devote its energies to the development of pharmaceutical Americana.

Adam Conrath Memorial Fund

In 1912 the Wisconsin graduates of the Philadelphia College of Pharmacy gave \$75 to the University to establish the Adam Conrath Memorial Fund. This sum is to be added to from time to time until the amount reaches \$250. The income is then to be used to maintain a set of the *American Journal of Pharmacy* in the University.

The Hollister Fellowship

In accordance with the wills of the late Mr. and Mrs. Albert Hollister, there has been deposited with the Board of Regents the sum of \$10,328, the income of which is to be used to maintain a fellowship in Pharmacy.

Terms of Admission

The requirements for admission to the several colleges of the University are described on previous pages. See Index under Admission.

The special requirements for admission to the Two-year Pharmacy Course are herewith repeated.

I. Graduates from high schools are admitted without examination and without practical experience in a drug store.

II. Nongraduates are admitted if they comply with the following requirements:

1. They must be at least eighteen years of age.

2. They must present satisfactory certificates of *at least two years'* attendance from some standard high school, or its equivalent from a similar educational institution.

3. The time intervening between the secondary education and the college course should have been spent in a drug store where physicians' prescriptions are regularly compounded.

Degrees

The first degrees given in Pharmacy are those of Graduate in Pharmacy, upon completion of the Two-year Course, and of Bachelor of Science, Pharmacy Course, conferred upon candidates who have successfully met the requirements of the Four-year Course.

The degree of Master of Pharmacy is conferred as a second degree upon graduates in Pharmacy.

The degrees of Master of Science and Doctor of Philosophy are conferred as higher degrees upon candidates who have a baccalaureate degree.

Fees and Expenses

The tuition and laboratory fees and an estimate of expenses for board and lodging are given on previous pages. (See Index.)

Courses of Study

Two-Year Course

First year. *First semester:* Chemistry 1, 5 cr.; Botany 1, 5 cr., and 35, 1 cr.; Pharmacy 1, 3 cr.; 20, 3 cr.; and 40, 1 cr.; *Second semester:* Chemistry 1, 5 cr.; 11, 3 cr.; and 117, 3 cr.; Botany 130, 4 cr.; Pharmacy 1, 3 cr., and 40, 1 cr.

Second year. *First semester:* Chemistry 20, 4 cr., 26, 4 cr., and 40, 3 cr.; Botany 110, 3 cr., and 32, 2 cr.; Pharmacy 30, 1 cr., and 50, 1 cr. *Second semester:* Chemistry 27, 5 cr.; 28, 1 cr.; and 40, 3 cr.; Botany 111, 3 cr., and 32, 2 cr.; Pharmacy 121, 4 cr., and 50, 1 cr. Thesis.

For detailed information as to the foregoing courses see the announcements of the several departments of the College of Letters and Science.

Students who desire to include pharmaceutical studies as a part of their general college education elect the prerequisite studies enumerated below. Such a course, if to lead to the degree of Bachelor of Science, Pharmacy Course, must include courses 1, 20, 30, 40, 50, and 121, in Pharmacy, and course 32 in Botany.

Basal sciences: Chemistry 1, 11, 20, 117 or their equivalents; Botany 1, and 130 or its equivalent; Physics 1. These should be taken during the first and second years.

Advanced sciences: Chemistry 26 and 27; Botany 110 and 111. These courses should be taken during the third year in order that the courses in Pharmacy and Pharmacognosy mentioned above may be taken during the fourth year.

The language requirements of this course are English 1a and 1b, French 1a and 1b, and German 2a and 2b, or their equivalents, which should be taken during the first and second years.

The major study and thesis may be taken in chemistry, botany, pharmacy, or any department in which the student is sufficiently prepared to do such work. For the rules governing the major study and thesis, see Index under Major Study.

Additional electives sufficient to make 120 unit-hours may be chosen upon consultation with the adviser for pharmacy students. 120 grade points are also required for graduation (see p. 81).

LIBRARY SCHOOL

MATTHEW S. DUDGEON, Director; MARY EMOGENE HAZELTINE, Preceptor; CLARENCE B. LESTER, In Charge of Special Course.

Purpose of the School

The purpose of the course in general library science is to train well rounded library workers. Though the educational and literary features of the profession are strongly emphasized, the course deals mainly with the fundamental principles of bibliographical, technical, and administrative library work necessary to meet the demands of the library world. The students have exceptional opportunities to come into contact with actual rather than theoretical problems, and to work these problems out to practical solution. The instruction in general library science may be taken.

(a) As an independent library course of one year, by all who meet the entrance requirements of the school. The certificate of the Library School is given to those who satisfactorily complete this course.

(b) As a joint course by senior students in the College of Letters and Science, who qualify for entrance. Students who take the joint course may not begin the work of the Library School until they have obtained at least 96 credits in the College of Letters and Science and passed the entrance examinations of the Library School. Of the twenty credits of Library School work accepted by the University, four may be counted toward an English major, if the candidate chooses that subject. This joint course leads to the degree of Bachelor of Arts from the University, and to the certificate of the Library School.

Entrance Requirements

Each candidate for admission to the Course in General Library Science must fill out an application blank, copies of which can be obtained from the Preceptor, Miss Mary Emogene Hazeltine, Library School, Madison, Wisconsin.

Without exception, all such applicants are required to take the entrance examinations, which are held on the second Friday in June of each year. These examinations are competitive, and can be taken only at the time specified. They cover history, general

literature, current events, and German or French. The completion of a high school course or its equivalent is prerequisite for admission to the examinations. Only those who by personal interview or otherwise demonstrate a personal fitness for the work will be considered eligible.

Applicants for the joint course take these examinations at the end of their junior year. Experts are agreed that the best foundation for success in library work is a sound general education, and the ideal plan of preparation is a four-year college course, followed by one or more years of technical training. It is for those who are not able to afford so much time that the joint course has been arranged. Applicants for the independent course of one year should bear in mind the importance of a college course as an educational equipment for library work. *Students will be admitted only at the beginning of the first semester.*

Accepted candidates for the Course in General Library Science must meet several extra entrance requirements before joining the classes in the fall. All who have not had experience in library work must spend at least one month in actual work in a designated library *before the school opens in September*. Candidates must be skillful with the typewriter before entering, as the school requires its use in the preparation of many of the lessons, and no instruction in this is given in the school. It is also required that the standard "library handwriting" be mastered. Accompanying the application blank is a required list of books to be read in preparation for the first recitation of the school year in book selection. These requirements apply both to students in the independent course and in the joint course.

Special Course

In cooperation with the Legislative Reference Department of the Wisconsin Free Library Commission, the Library School also offers a special course of training for legislative and municipal reference work and the various sociological phases of library service. The course is intended for college graduates with special aptitude and personal qualifications for this type of library service who have a definite preparation in political science, economics, and sociology. Application blanks may be obtained by applying to C. B. Lester, Legislative Reference Library, Madison, Wisconsin.

Tuition and Expenses

For students taking the one year of instruction in general library science the fee is \$50 for the course for residents of Wisconsin, \$25 being payable at the opening of each semester. For nonresidents, the fee is \$100 for the course, \$50 being payable at the opening of each semester. The average cost of textbooks and supplies for each student is estimated to be \$25 for the year.

For students taking the joint course or the legislative reference course, the fee is that required by the University as incidental and tuition fees. If, however, these are less than the stated Library School fees, the student will be required to make up the difference.

Course of Study and Credits

First Semester. Cataloguing, 5 cr.; Classification, 3 cr.; Reference, 3 cr.; Evaluation and Selection of books, 1 cr.; Trade Bibliography and Publishing Houses, 1 cr.; Library Economy, 1 cr.; Administration, 1 cr.

Second Semester. Reference, 3 cr.; Library Economy, 3 cr.; Subject Bibliography, 2 cr.; Evaluation and Selection of Books, 1 cr.; Children's Literature, 1 cr.; Administration, 1 cr., Documents, 1 cr.; Field Practice, 3 cr. The thesis for joint course students will be under the direction of the university department in which they choose their major subject, and the bibliography included in it will be accepted by the Library School in satisfaction of its thesis requirements.

Candidates for the degree of Bachelor of Arts who secure, as part of the 120 credits required for the degree, twenty credits in the Library School, will be awarded the certificate of the Library School upon the completion of the full number of credits in the school as given above. The satisfaction of the requirements for both the degree and the certificate, under this plan, will normally involve residence at the University for four years and one summer session.

The instruction in legislative reference work is made up of three elements which together constitute a single unitary course.

I. Bibliographic and technical library studies.

These include fundamental studies from the general course.

II. Elective work at the University of Wisconsin.

To each student there is assigned work in courses given at the University, especially in political science and economics.

III. Special instruction and research.

The regular library school work is supplemented by special instruction as to the methods and materials of special libraries, combined with actual practice in the legislative reference library and elsewhere. The research is upon actual problems arising in the various departments of state and municipal government.

Course for Teacher-Librarians

This course, authorized by the Regents in June, 1916, is offered in direct response to a formally expressed demand coming from city superintendents and high school principals of the state. It is likely that in the near future the State Department of Education will require all state aided schools to employ one teacher-librarian who has had the training represented by such a course, or its equivalent.

The object of the course is to qualify those taking it to assume, in connection with instructional duties, the supervision of high school libraries, and to qualify them also to give instruction to high school students in the use of books and libraries, and in the means and methods of developing good habits and right tastes in reading.

The course is conducted by the faculty of the Library School, in the library of the Wisconsin High School which serves as a laboratory. It is a year course carrying four credits for the year, and is open to juniors and seniors who are prospective teachers.

The subjects include cataloguing, classification, and library economy, each lesson followed by practice work; book selection and evaluation, use of reference books, indexes, and library helps, mending, binding, and care of books, lending of books, how to teach pupils to use books, equipment and administration of school libraries.

Special Catalogue

Detailed information regarding the Library School is given in the special catalogue of the school. A copy of this can be obtained from the Preceptor, Miss Mary Emogene Hazeltine, Library School, Madison, Wisconsin.

For any more specific information as to the legislative reference course, apply to C. B. Lester, Legislative Reference Library, Madison, Wisconsin.

COURSE FOR THE TRAINING OF TEACHERS

V. A. C. HENMON, Director, Professor of Education.

General Statement

The Course for the Training of Teachers is intended to prepare students for teaching and for supervising instruction, particularly in the public high schools of the state. This preparation rests upon the basis of a sound general education, and consists of the following principal parts: (1) special academic instruction in the subjects to be taught; (2) professional training by means of (a) departmental teachers courses, (b) courses in education and psychology, (c) educational practice, including observation of teaching, under supervision, in the Wisconsin High School and in the Madison public schools, and the activities involved in the work of directed teaching as carried on in the Wisconsin High School.

The demands made upon teachers under modern educational conditions render it highly desirable that preparation for teaching should include one year of graduate study in addition to the four years of college work. Practical, as well as professional, considerations do not make this high standard of qualification generally feasible. As at present organized the Course for the Training of Teachers includes provision for:

I. A course to be completed during four years of undergraduate work, supplemented by additional study during one summer session, designated as the Undergraduate Course, and leading to the University Teachers Certificate.

II. A graduate course to be completed during two summer sessions or one semester of study, designated as the Advanced Course, and leading to a special certificate of professional fitness. (See p. 265)

Undergraduate Course for the Training of Teachers

Admission and Registration

The completion of the first two years of college work is necessary for admission to the professional work preparatory to teaching.

1. To become a candidate for the University Teachers Certificate, a student must, before December first of the junior year, in addition to the usual registration, register in the Course for the Training of Teachers.

2. Each registrant must indicate for the joint approval of the instructor in charge of the departmental teachers course, and the director of the course, the subject or subjects, preparation for the teaching of which is contemplated. In no case will more than three related subjects be approved. (A major subject; a major and one minor subject; a major and two minor subjects.)

Requirements for Completion

The recommendation to receive the University Teachers Certificate is based upon:

1. The satisfactory fulfillment of the requirements of preparation for teaching of either (a) a major subject, (b) a major subject and one minor subject, or (c) a major subject and two minor subjects.

To fulfill the requirements of preparation for the teaching of the selected major, a student must present credits in amount and kind as prescribed by the department of such major subject. This departmental prescription must in all cases include at least twenty credits, and, in addition, credit for the departmental teachers course. (See departmental professional requirements, pp. 255-265, for the credit requirements prescribed by the different departments.)

To fulfill the requirements of preparation for the teaching of the selected minor subject or subjects, a student must present credits in amount and kind as prescribed by the department of such minor subjects. This departmental prescription must contain ten credits, exclusive of the departmental teachers course. (See departmental professional requirements, pp. 255-265, for the credit requirements prescribed by the different departments.)

2. The recommendation of the departments of the major and minor subjects as to general fitness for teaching.

3. The presentation of a certificate of physical health and fitness from the University Medical Examiner.

4. The completion of the special requirements indicated in the following sections.

University Teachers Certificate

A. General Requirements. (1) The requirements for the University Teachers Certificate shall consist, in addition to the work done in the major and minor subjects, of the following credits:

	<i>Maximum</i>	<i>Minimum</i>
Psychology (Philosophy 1).....	3 cr.	3 cr.
Education.....	12 cr.	12 cr.
Departmental Teachers Course (Major)	4 cr.	2 cr.
Departmental Teachers Course (Minor)	2 cr.	.....
Total.....	21 cr.	17 cr.

(2) The maximum requirements of four credits for the departmental teachers course in the major subject, and of two credits for the departmental teachers course in the minor subject are at the option of the department. The minimum of two credits in the departmental teachers course of the major must be secured by *all* students.

(3) Only two of the credits earned in departmental teachers courses of the major subject need to be included in the maximum of forty credits allowed for a major toward a bachelor's degree.

B. Education Requirements. The requirement in Education is subject to the following conditions:

- (1) A minimum of *twelve* credits in Education is required.*
- (2) These twelve required credits are to be distributed as follows:
 - (a) Educational Practice (Education A).....2 credits
 - (b) Elementary courses (see note 4 below).....8 credits
 - (c) Advanced course (see note 5 below).....2 credits
- (3) The course in Educational Practice (Education A) is required of all students. Graduates of state normal schools and teachers of experience may, however, upon the presentation of satisfactory evidence of teaching ability be permitted, by special action of the Department of Education, to substitute therefor two credits from advanced courses in Education.
- (4) The eight credits in elementary courses in Education must be acquired from courses 1, 6, 11, 41. This requirement may be fulfilled by taking each of the elementary courses for two credits, or by taking two of the courses for three credits each, and one course for two credits. Normal school graduates do not fulfill this requirement (see note 6).
- (5) The two credits in an advanced course in Education must be acquired from one of the following courses: 102, 103, 104, 105, 112, 113, 144.

*Except for normal school graduates; see following notes 3, 4, and 6.

- (6) Graduates of state normal schools fulfilling the requirements for the University Teachers Certificate must present a minimum of six credits from advanced university courses in Education.

C. Additional Requirements; Summer Session. (1) Candidates for the University Teachers Certificate must secure *eight* credits in addition to the one hundred and twenty credits required for the bachelor's degree; and for such certificate the residence requirement is one summer session in addition to the regular residence requirement. This additional summer session may not be taken earlier than the close of the sophomore year.

(2) Students of ability, allowed under the general regulations to take more than the regular amount of work, may be permitted by the Committee on the Training of Teachers to acquire the eight extra credits without attendance upon the additional summer session.

(3) All exemptions from the summer session requirement must be under the following special conditions, adopted by the Committee on the Training of Teachers (January 20, 1915):

(a) The privilege of receiving the University Teachers Certificate in four years without a summer session will be granted only to students of approved ability. Such students may apply to the Director of the Course for the Training of Teachers for this privilege during the second semester of the junior year.

(b) No extra credits (that is, credits above fifteen a semester) gained during the freshman year may be counted toward the eight additional credits required for the University Teachers Certificate.

(c) At least *five* of the eight additional credits required for the University Teachers Certificate shall be earned during *two consecutive* semesters of the junior and senior years; provided that in these two semesters, and in the semester immediately preceding, a record of *good* or above in all subjects is obtained.

D. Order and Arrangement. The following order and arrangement in the fulfillment of the above special requirements as approved by the Committee on the Training of Teachers are to be regarded as normal and are recommended to the attention of students and advisers:

(1) Before the end of the second semester of the junior year credit in psychology (Philosophy 1), *three* credits, and not less than *four* credits in elementary courses in Education should be acquired.

(2) The six credits to be earned by summer session attendance should be divided between the major subject and education (elementary or advanced).

(3) During the senior year credit in the departmental teachers course of the major should be acquired.

(4) During the second semester of the senior year credit in the departmental teachers course of the selected minor or minors should be acquired.

(5) Credit for Education A (Educational Practice) may be acquired during the first or the second semester of the senior year.

E. Agriculture and Home Economics. (1) Graduates of the Long Course in Agriculture, and graduates receiving the B. S. degree in Home Economics, who have complied with the regulations relative to registration, and to approval of major and minor subjects, will be entitled to receive the certificate upon completion of the special professional requirements indicated (see Agriculture, p. 255; Home Economics, p. 259).

State Teachers License

Upon the fulfillment of the foregoing requirements a student will be recommended by the Director of the Course to the President of the University, to receive the certified statement prescribed by section 458b—2 of the Laws of Wisconsin as amended by chapter 514, Laws of 1913. This certified statement, indicating the subject or subjects, the requirements for the teaching of which have been fulfilled, when presented to the state superintendent, entitles the holder to receive a license to teach for one year in any public school in Wisconsin. Graduates who have received this university certificate and who present satisfactory evidence of good moral character, and two years of successful teaching after graduation, are entitled to receive from the state superintendent an unlimited state certificate.

It may be noted that the requirements for the University Teachers Certificate are in advance of the minimum fixed by law for a license to teach. Students desirous of informing themselves as to the provisions of the law may ascertain them from the office of the State Superintendent of Public Instruction.

Wisconsin High School

General Statement

The Wisconsin High School, a six-year secondary school, was opened in September, 1911, and is maintained by the University as an integral part of the Course for the Training of Teachers. The primary purposes of this school are (a) the exemplification of sound educational theory and organization, with special reference to secondary education, and (b) the provision of appropriate facilities for observation and directed teaching. The new building, costing \$150,000, was occupied September, 1914.

The details of the organization, program of studies, etc., of the Wisconsin High School will be found in the annual announcement of the school.

Government of the School

In its relation to the University, the school is under the general oversight of the Director of the Course for the Training of Teachers. The principal is charged with immediate responsibility for the administration of the affairs of the school and for the proper direction of the work of pupils and teachers. The members of the Department of Education of the University constitute a supervisory council for the general supervision of the methods of teaching. Each department of instruction is under the general supervision of a representative of the corresponding university department.

Departments of Instruction

Only such departments and courses of instruction are here indicated as are immediately related to the professional work mentioned in the Undergraduate Course for the Training of Teachers. The announcements of the several departments and colleges of the University should be referred to for more extended and detailed information regarding the courses of instruction open to those students intending to teach.

Agriculture

Major. Graduates of the Long Course in Agriculture, properly registered in the Course for the Training of Teachers, will be entitled to receive the University Teachers Certificate upon the recommendation of fitness by the professor of Agricultural Educa-

tion, and upon completing the following courses: psychology (Philosophy 1) three cr., education, four cr., agricultural education, four cr. A minimum of fifteen credits of professional work is required.

Graduates of the Middle Course in Agriculture, properly registered in the Course for the Training of Teachers at the beginning of the second year, will be entitled to a recommendation to teach agriculture in the schools of Wisconsin, upon exhibiting evidence of personal fitness for teaching and upon the satisfactory completion of Education 1, 6, 11, or 41, Agricultural Education 1, and who meet their elective requirements from the following group of subjects: Agronomy 120 or 140, Agricultural Engineering 2, Animal Husbandry 128, Dairy Husbandry 2 or 110, Economic Entomology 101, Horticulture 3, Poultry 2, Soils 2, and Veterinary Science 2 or 3.

Departmental Teachers Course. Agricultural Education 1, 4 cr. Mr. Hatch, Mr. James.

Botany

Students preparing to teach botany, either as a major or minor subject, are advised to elect courses in both structural and physiological botany, and also those that involve field work.

Major. A minimum of twenty credits from the following courses: Botany 1, 2, 90, 103, 104, 105, 106, 110, 129, 130, 146, 147, 150.

Minor. A minimum of ten credits, in addition to course 90, selected from the following courses: Botany 1, 2, 103, 104, 105, 106, 110, 129, 130, 146. Attention is called to courses 1 and 2, which together constitute a year's work and are especially adapted to the needs of those taking a teachers minor in Botany.

Departmental Teachers Course. Botany 90. The Teaching of Botany. II; 2 cr. Mr. Gilbert.

Chemistry

Major. A minimum of twenty credits, including courses 1, 120, (first semester), and 11 (at least five credits).

Minor. A minimum of ten credits.

Departmental Teachers Course. Chemistry 5. The Teaching of Chemistry. II; 2 cr. Prerequisite, major requirements above indicated. Course 11 may be taken simultaneously. Mr. Walton.

Commerce

The Course in Commerce affords certain facilities for those students who wish to prepare themselves to teach commercial subjects in secondary schools. Such students are advised to consult with the director of the Course in Commerce in the arrangement of elective work. Special facilities for pedagogical practice will be given such students in connection with the accounting laboratories, and work in addition to that prescribed may be arranged in subjects of especial importance to teachers.

Drawing

See under Manual Arts.

Economics

See under Political Economy.

Education

For general information concerning the equipment, and the courses offered in Education, see Index under Education. For detailed information relative to the special requirements of courses in education for the University Teachers Certificate see pp. 251-254.

English

Major. A minimum of twenty-eight credits, in addition to the thesis, and exclusive of courses 1a and 1b (required of all students). The twenty-eight credits must include courses 30, 50a, 50b, 120a, and one course from each of the following groups: 36 or 137; 34, 35, or 40. A total of thirty-six credits, in addition to the thesis and courses 1a and 1b, may be taken. Students who have had an adequate training in Latin or Greek (usually six years of Latin or four of Greek) may substitute some other English course for 120a; and any student may substitute courses 123 and 25 for 120a with the approval of his adviser.

Minor. A minimum, in addition to courses 1a and 1b (required of all students), including course 30; 50a, and an advanced composition course in the sophomore or junior year (2, 3a, 3b, 5, or 6); and one of the following groups: (a) 34 and 35; (b) 36 or 137; (c) 40.

Departmental Teachers Courses. English 50a. The Teaching of English. I; 2 cr. Mr. Pendleton.

English 50b. The Teaching of English. II; 2 cr. Mr. Pendleton.

French

See under Romance Languages.

Geology

See under Physiography and Geography.

German

Major. Students beginning the study of German in the University with course 1a will find it difficult to prepare to teach German as a major subject, unless they show special aptitude for the work. Students taking courses 2a and 2b in the freshman year will as a minimum have to devote to German from eight to ten semester hours a year for the remaining three years, taking thus, including the thesis, a total of at least twenty-four credits in advance of course 2b. For the maximum number of credits that may be elected see p. 153. The following courses are required: courses 10 or 112, 114a, 114b, 130 or 131, 150 and 151.

Minor. Courses 10 or 112, 92 (for one or two credits), and at least four credits from courses 21 to 28, 130 or 131. Students who are preparing to teach German as their major or minor subject and have done a considerable amount of work elsewhere or have had successful teaching experience may be excused, by action of the department, from some of the required work. Such excuse will generally be granted only on the basis of an examination and in no case will students be recommended by the department unless they have taken at least four credits of work in the department.

Departmental Teachers Courses. German 92. Teachers Course for Minors. I; 2 cr. (3 hours). Conversation, grammar, phonetics; 1 cr. (2 hrs.); Methods and organization of a two-year course; 1 cr. For seniors. Mr. Deihl.

German 114a. Teachers Course for Majors. 1; 2 cr. Methods. For seniors and graduates. Mr. Deihl.

German 114b. Teachers Course for Majors. II; 2 cr. Phonetics. For seniors and graduates. Mr. Aron.

Government

See under Political Science.

Greek

Major. A minimum of eighteen credits in courses 10, 11, 20, 21, and either 105a and 105b or 106.

Minor. A minimum of courses 10, 11, 20, and 21.

Departmental Teachers Course. The Department of Greek does not offer a regular departmental teachers course. For those preparing to teach Greek, opportunity is provided to study the methods and aims of the instruction through the university classes in Elementary Greek.

History

Major. A minimum of thirty credits, of which at least sixteen must be in advanced courses and thesis, and in addition course 150.

Minor. A minimum of sixteen credits in addition to course 151. These sixteen credits must include at least four in advanced courses.

Departmental Teachers Courses. History 150. The Teaching of History. I or II; 2 cr. Mr. Chase.

History 151. Supplementary Reading for High School Teachers of History. II; 2 cr. Mr. Chase.

Home Economics

Major. A minimum credit of courses 2, 3, 5, 9, and such other Home Economics credits as to make thirty-six to forty. A major may be taken in the General Course, in Food and in Textiles. Graduates of the Course in Home Economics who have fulfilled this minimum credit, and who have been properly registered in the Course for the Training of Teachers will be entitled to receive the University Teachers Certificate upon the recommendation of fitness by the Department of Home Economics and upon completing the following courses: psychology (Philosophy 1), three cr., education, five cr., Departmental Teachers Course, two cr. A minimum of ten credits of professional work is required. Courses numbered in the nineties may be counted as additional professional credits.

Minor. A minimum of fifteen to twenty credits. A minor may be taken in Foods, Textiles, or Housing Problems.

(1) A minor in Foods must include Home Economics 1, 3, 4, and other related courses to make fifteen to twenty credits.

(2) The minor in Textiles must include courses 2, 5, 11, and other related courses to make fifteen to twenty credits.

(3) The minor in Housing Problems is intended to be taken with a major or minor in Sociology so that those intending to do the

work of sanitary inspector or other social settlement work will have a broad foundation knowledge of the fundamental problems in housing conditions. This minor includes Home Economics 2, 7, 8, 10, for which the prerequisites are Physics 1, Bacteriology 4.

Departmental Teachers Course. Home Economics 121. The Teaching of Home Economics. Prerequisite: a major or minor in Home Economics. I or II; 2 cr. Miss Binzel, Miss Dodge.

Latin

Major. A minimum of twenty-four credits, including courses 107, 116, and one advanced reading course for one year.

Minor. A minimum of twenty credits, including course 116 and one advanced reading course for one year.

Departmental Teachers Course. Latin 116. The Teaching of Latin. I (required) 2 cr.; II (elective) 2 cr. Miss Sabin.

Library Science

The Library School offers for those who are qualifying themselves for positions as high school librarians the following course:

Library Science for Teachers. Yr.; 4 cr. The object of the course is to qualify those taking it to assume, in connection with instructional duties, the supervision of high school libraries, and to qualify them also to give instruction to high school students in the use of books and libraries, and in the means and methods of developing good habits and right tastes in reading. Open only to juniors and seniors. Miss Hazeltine, Miss Carpenter, Miss Turvill, Miss Bascom, and other members of the instructional staff of the Library School.

See detailed statement, page 246, and also statement on page 141.

Manual Arts

Major. A minimum of thirty credits in selected courses. A major may be taken in courses in drawing, design, crafts and industrial work.

Minor. Teachers of Elements of Drawing and Shopwork. A minimum of seventeen credits, including courses 1, 4, 5, one semester of 112, and either 50 or 62, or selected substitutes.

Minor. Teachers of Freehand Drawing and Design. A minimum of seventeen credits, including courses 1, 50, 51, 62, one semester of 112, and either 15, 70 or 71, or selected substitutes.

Departmental Teachers Course. Manual Arts 112. The Teaching and Supervision of Manual Arts. Yr.; 4 cr. (Two credits may be elected either semester). Mr. Crawshaw.

Mathematics

Major. (a) A minimum of courses 5 and 6, and 112, or 113, or 115, and the courses that necessarily precede them; (b) course 11 is open to those who offer Mathematics as a major. At the discretion of the department it may be required of individual students; (c) a knowledge of solid geometry obtained in the secondary school or elsewhere.

Minor. (a) A minimum of twelve credits from courses 1 to 7, 51, 52, 71, 115 in Mathematics and course 3 (Descriptive Geometry) in Drawing. Six of these credits must be earned in residence at the University of Wisconsin, with a grade of at least *fair*; (b) course 10 is required of all who offer Mathematics as their principal minor; course 11 is open to such students and, in individual cases, may be required at the discretion of the department; (c) a knowledge of solid geometry obtained in the secondary school or elsewhere.

Departmental Teachers Courses. Mathematics 10. The Teaching of Mathematics. I or II; 2 cr. Mr. Hart.

Mathematics 11. The Content of Secondary Mathematics. II; 2 cr. Mr. Hart.

Music

While the completion of the four-year course leading to the degree of Bachelor of Music, with a major in Public School Music, gives the broadest training for the constantly enlarging field of this branch of teaching, students satisfactorily completing the Two-Year Course for Supervisors of Music will be entitled to a recommendation to the State Board of Examiners to receive a special state license to teach music in the public schools of the state. This recommendation will be issued by the Director of the Course for the Training of Teachers, providing (a) that the student registers in the Course for the Training of Teachers not later than December first, of the first year of residence; (b) that the student has earned special credits as follows: psychology (Philosophy 1), 3 cr.; Education 1, 6, 11, or 41, 3 cr.; (c) that the student presents a statement from the Director of the School of Music as to general fitness for teaching.

Philosophy

The following course must be completed by all students fulfilling the requirements of the Undergraduate Course for the Training of Teachers.

Philosophy 1. (psychology): Introductory course. I; 3 cr. Mr. Jastrow, Mr. Sharp, Mr. Otto, Mr. Starch, Mr. Hull. II; Mr. Starch.

Physical Education

(See also p. 190).

Major. Students regularly entered in the College of Letters and Science, electing their major in Physical Education are required to take courses 20 (for four years), 56, 59, 63, 67, 107, 108, 114; courses 21-50 (at least four credits) and thesis (four credits), a total of thirty credits; Physical Education 19 or Education A; Anatomy 121, Physiology 114, and 105 or 115, and satisfy prerequisites in biology, chemistry, and psychology, or their equivalents. Additional credit in Physical Education may be secured in courses 107, 16, 55, 62, 66, 68, 70, 80, and 21-50.

Graduates with a major in Physical Education who have been registered in the Course for the Training of Teachers will be entitled to receive the University Teachers Certificate upon fulfilling the major requirements and completing the following courses: Psychology (Philosophy 1), 3 cr.; Education, 5 cr.; and the Departmental Teachers Courses. A total of one hundred and twenty-eight credits is required.

Minor. Students electing Physical Education as a minor subject must take courses 20 (for two years), 59 or 107, 67 (two credits) 66, and 21-50 (for four credits) a minimum of ten credits. Physical Education 19 or Education A may also be required depending on the major subject of the student. Additional credits may be secured in courses 16, 55, and 21-50. Prerequisites are Zoology or Chemistry, Physiology 1 and Philosophy 1, and elementary education at least three credits.

Departmental Teachers Course. Physical Education 67. Principles of Teaching and Adaptation. Yr; 2 or 4 cr. Mr. Hetherington.

Physics

Major. A minimum of twenty credits in approved courses.

Minor. A minimum of ten credits in approved courses.

Departmental Teachers Course. Physics 8. The Teaching of Physics. II; 2 cr. Mr. Steve.

Physiography and Geography

Major. A minimum of twenty credits in approved courses in the Department of Geology including course 110a.

Minor. A minimum of twelve credits in approved courses in the Department of Geology including course 110a.

Departmental Teachers Course. Geology 110a. The Teaching of Physical Geography. I; 2 cr. Mr. Whitbeck.

Geology 110b. The Teaching of Commercial Geography, II; 2 cr. Mr. Whitbeck.

Physiology

The Departments of Anatomy, Physiology, Bacteriology and Hygiene, acting conjointly, have outlined the following as a preparation for teaching human physiology.

Major. A minimum of twenty-three credits in the following courses: Physiological Chemistry 104 (prerequisite: organic chemistry), 4 cr.; Anatomy 105 (prerequisite: Biology 1), 3 cr.; Anatomy 115, 2 cr.; Physiology 105, 9 cr.; Bacteriology 102, 5 cr.

In order to fulfill these requirements, Physics 1 or 1Sc., Chemistry 1, and Biology 1, should be completed before the beginning of the junior year.

Minor. A minimum of eleven credits in the following courses: Physiology 1 and 2, 4 cr.; Hygiene 1, 2 cr.; either Bacteriology 1 or 4, 5 cr.; general chemistry is strongly advised before taking physiology or bacteriology.

Minor. Special requirements for Home Economics students; Physiology, 3 cr.; Hygiene, 2 cr.; Bacteriology, 5 cr.

Political Economy

Major. A minimum of twenty-four selected credits exclusive of thesis.

Minor. A minimum of ten selected credits.

Departmental Teachers Course. Political Economy 190. The Teaching of Economics. II; 2 cr.

Political Science

Major. A minimum of twenty-one credits, in addition to the thesis, in approved courses, and including course 29.

Minor. A minimum of sixteen credits in approved courses.

Departmental Teachers Course. Political Science 29. The Teaching of Government. II; 2 cr. Mr. Hall.

Public Speaking

Major. A minimum of twenty credits in addition to thesis and courses 118 (a and b).

Minor. A minimum of sixteen credits in selected courses.

Departmental Teachers Courses. Public Speaking 118a. Teachers Problems in Reading and Dramatics. (Open only to graduates and senior major and minor students in Public Speaking). I; 2 cr. Miss Johnson.

Public Speaking 118b. Teachers Problems in Speech-Making and Debate. (Open only to graduates and senior, major and minor students in Public Speaking). II; 2 cr. Mr. O'Neill.

Romance Languages

FRENCH

Major. A minimum of twenty credits in advance of second-year French. The following courses are required: course 90a and one two-credit composition or conversation course, or two one-credit courses in such work. At least one of the three-credit courses dealing with an extensive period of French literature and course 90b in French pronunciation should be taken. For those taking more than the minimum, course 240 is recommended.

Minor. A minimum of ten credits in advance of second-year French. At least one course in conversation or composition and one course in some extensive period of French literature should be taken. The requirements for preparation to teach French as a minor will vary greatly, depending upon the acquirements of the student in first and second year work. All such students are advised to consult with the chairman of the Department of Romance Languages during their second year's work in French.

ITALIAN

Students preparing to teach Italian should consult with the chairman of the Department of Romance Languages.

SPANISH

Major. A minimum of twenty-two credits in advance of Spanish 1. French 90a (The Teaching of French and Spanish) and at least one course in composition or conversation must be taken. Com-

merce courses may be counted toward a major in Spanish by special permission.

Minor. A minimum of eight credits in advance of second-year Spanish. At least one course in conversation or composition and one course in some period of Spanish literature should be taken.

Departmental Teachers Course. French 90a. The Teaching of French and Spanish. Yr.; 2 cr. Miss Gay.

Spanish

See under Romance Languages.

Zoology

Major. A minimum of twenty credits from the following courses: Zoology 1a, 1b, 11, 9, 102a, 104a, 105. In special cases other courses may be substituted by permission of the chairman of the department.

Minor. A minimum of ten credits from the following courses: Zoology 1a, 1b, 9, 102a, 104a. Attention is called to courses 1a and 1b which together constitute a year's work and are especially adapted to the needs of those taking a minor in Zoology.

Departmental Teachers Course. Zoology 20. The Teaching of Zoology. II; 2 cr. Mr. Pearse.

Advanced Course for the Training of Teachers

By action of the Faculty of the College of Letters and Science, December 18, 1916, upon the recommendation of the Committee on the Training of Teachers, the Advanced Course for the Training of Teachers was discontinued, with the provision that those who are already registered and who complete the requirements shall be entitled to receive the Certificate.

Teaching Fellowships

In accordance with the policy of encouraging graduate study, and for the purpose of providing more thorough and extended preparation for teaching and supervisory positions in the public schools of the state, the Regents of the University have established six special fellowships, known as Teaching Fellowships. These are open only to graduates of the University of Wisconsin. Appointments are made from the senior class upon the recommendation

of the Committee on the Training of Teachers and are for a period of one academic year. Each fellowship has an annual value of \$275. The holders of these fellowships devote one-half year to special graduate study within the University, and one-half year to apprenticeship teaching, under supervision in one of the so-called "cooperating high schools." A further payment of approximately \$135 is made for the service rendered by each fellow in the cooperating high school.

Further details concerning the fellowships may be obtained from the Director of the Course for the Training of Teachers.

Industrial Teaching Scholarships

For the purpose of encouraging, on the part of skilled craftsmen, special professional preparation for teaching in industrial vocational schools, the Regents established, in 1912, one resident industrial scholarship having an annual value of \$400. Two of these scholarships were provided for 1916-1917. Appointment is for one year, and is made upon the joint recommendation of the Professor of Manual Arts and the Director of the Course for the Training of Teachers.

Special Industrial Scholarships

Each year the Department of Manual Arts conducts what is known as the Mechanics Institute. This institute is composed of the holders of special industrial scholarships. The Regents of the University have established twelve of these scholarships for the purpose of encouraging skilled craftsmen to prepare to teach industrial arts in public schools, especially public continuation schools. Each scholarship entitles the holder to an honorarium of \$60, paid at the conclusion of the institute which is held for eight weeks, usually during the months of April and May. Detailed information relative to the requirements for appointment to the special industrial scholarships and to the work of the Mechanics Institute will be furnished upon request to Professor F. D. Crawshaw.

Graduates of Normal Schools

Graduates of the advanced course of the normal schools of the state, admitted to the University, may obtain the University Teachers Certificate by fulfilling in their university course the specified requirements. Such normal school graduates, when can-

didates for the Bachelor of Arts degree, must present a minimum of six university credits in Education.

Special Lectures

In order that the Course for the Training of Teachers may be maintained and developed in close relation with the practical educational interests of the state, the University aims each year to enlist the cooperation of presidents and professors of the normal schools, superintendents, principals, and others engaged in educational work as special lecturers.

Relations With Madison Public Schools

By the terms of formal agreement entered into by the Regents of the University and the Board of Education of the city of Madison, the classes of designated teachers in the Madison High School and specified elementary schools are open to students in the Course for the Training of Teachers for the observational study of teaching.

COLLEGE OF ENGINEERING

FREDERICK E. TURNEAURE, DEAN, PROFESSOR OF ENGINEERING.

Organization of the College

The College of Engineering is organized in the belief that a thoroughgoing fundamental training is the first essential to a successful engineer, but that this fundamental training may be best secured not alone by theoretical study, but by giving attention as well to the practical application of the principles involved. It is further a leading thought that after the fundamental principles have been mastered, a certain measure of specialization in the main lines of engineering is advisable. In carrying out this plan the mathematical and theoretical courses are made strong in the earlier years, and a limited number of professional courses are given in the later years, while the drawing and shop courses continue progressively from the beginning to the end. Sufficient foreign language is given to enable graduates to read the professional German and French literature, and special attention is given to the subject of English composition.

Requirements for Admission to the Courses Leading to the B. S. Degree

Students are admitted either upon examination at the University or upon certificates from accredited schools, except that students from other colleges and universities and adult special students are admitted in accordance with the provisions stated on pages 107 to 109.

The College of Engineering Circular, giving detailed information concerning the College, may be obtained upon application to the Registrar of the University.

The requirements for the admission of regular freshmen are stated fully on pages 91-92; of advanced students on page 104; of adult special students on page 109.

Preparation in Algebra for Engineering

All students entering the College of Engineering will be tested in algebra by class work and by an examination given shortly after the beginning of the first semester. It is essential that students in the engineering courses shall possess a good working knowledge of algebra *at the beginning of their course*, and it is the purpose of the test to secure this by requiring a review of the subject shortly before entering the University. Students failing in the test are not permitted to continue with regular freshman mathematics, but are required to take a review of preparatory algebra during the first semester. A special course is provided for this purpose.

In performing the fundamental operations of algebra, such as multiplication and division, the use of parentheses, the solving of numerical and literal equations of the first and second degrees, the simplification of fractions and radicals, and the putting of problems into equations, it is of the first importance that the student should have distinct notions of the meaning and reasons for all that he does, and be able to state them clearly in his own language. He should be able to perform all these operations, even though somewhat complex, with rapidity, accuracy, and neatness. In his preparatory studies the student is advised to solve a great many practical problems and to describe fully the reason for the steps taken.

Student Advisers

In the selection and arrangement of studies, all students are under the supervision of advisers. It is the duty of the advisers to issue class cards at the opening of each semester, admitting students to their classes, to receive the regular semester reports from instructors, and special reports on deficient students, and to report to the Faculty all cases requiring special action.

Reports to parents or guardians on the work of students are sent from the Registrar's office at the end of each semester.

Fees and Expenses

For fees and expenses see General Information p. 66 and following.

At the beginning of the freshman year, students must be prepared to meet an expenditure of about \$70 for laboratory fees, drawing instruments, textbooks, and military uniform. For the second semester these expenses will not exceed \$10. For subsequent years the fees and textbooks will amount to from \$15 to \$20 per semester.

Equipment

Buildings

The main building of the College of Mechanics and Engineering contains the offices, recitation and drawing rooms, the engineering library, and laboratories for work in mechanical engineering, steam, and the testing of materials. A second building contains the electrical laboratories and the various departments for shop instruction; a third, the laboratories for chemical engineering; a fourth, the hydraulic laboratory; and a fifth, the mining building, the ore dressing and assaying laboratories.

For chemistry the Engineering students go to the Chemistry Building, for physics and other natural sciences to Science Hall, and for language, mathematics, and other similar work, to the literary halls of the University. In this way the students of Engineering come into daily contact with the students in the other courses.

Libraries

For a general account of the library facilities of the University, see page 64. The engineering library is housed in the main engineering building, where reading-room facilities are provided for about one hundred students. The collection of technical books is very complete and includes files and current numbers of about two hundred and fifty periodicals.

Laboratories and Apparatus

The Bridge Engineering Department owns several autographic extensometers and a deflectometer for determining bridge stresses under moving train loads. The department also possesses a

large number of photographs, drawings, and lantern slides illustrating details, erection methods, and complete structures of a great variety of design.

The Chemical Engineering and Applied Electrochemistry Laboratories are equipped for technical gas and fuel examinations, the equipment comprising all standard forms of analytical apparatus, gas and fuel calorimeters. Steam stills, evaporators, centrifugals, vacuum dryers, digesters, vacuum and pressure pumps, melting, roasting, and calcining furnaces, and other similar apparatus are installed for the study of chemical manufacture.

In the crushing and grinding room are various commercial types of coarse and fine crushers and disintegrators for treatment of ores and other raw materials. Magnetic, electrostatic, and other forms of separators are included in the equipment.

The applied electrochemistry equipment comprises a great variety of electrochemical appliances, a complete electroplating and refining room, an electric furnace room with various types of furnaces and sources of power, both alternating and direct, aggregating over 250 horsepower.

A complete equipment of base metal and platinum thermocouples, resistance thermometers, radiation and optical pyrometers, millivoltmeters, potentiometers, and furnaces are available for the testing of steels, refractory materials, ores, etc.

Metallographic microscopes of various types, furnaces, pyrometers, grinding and polishing machines, and photographic rooms are installed for the study of the structure and effects of heat and mechanical treatment on metals and alloys.

The Electrical Laboratories comprise a dynamo laboratory, a high potential laboratory, a photometry laboratory, and a standards laboratory.

These are all housed in the same building, and have recently been extensively remodeled. Their equipment is unusually complete and every facility is offered for efficient work. The Department of Electrical Engineering cooperates with the Wisconsin Railroad Commission in the use of its laboratories for standardizing work.

The Hydraulic Laboratory, which occupies its own building, is located on the shore of Lake Mendota. The facilities, therefore, are especially good for studying problems where large quantities of water under low heads are required. A 220,000 gallon concrete reservoir 60 feet above the laboratory on the bluffs supplies water under very steady heads. The university water works pumping station and pressure storage tank house, which immediately adjoin

the hydraulic laboratory, provide a water supply under heads up to about 170 feet. The laboratory is unusually well equipped. It has a thirty-inch centrifugal pump furnishing up to 35,000 gallons per minute, five concrete measuring chambers with a total capacity of about 10,000 cubic feet, various weir boxes and weirs, pipes of different materials and sizes, Venturi, and meters of disc and piston type, turbines, overshot and tangential wheels, pumps of various types, including two air lift pumps, hydraulic rams, and a full supply of apparatus designed for experimental purposes.

The Machine Shop affords excellent facilities for mechanical practice. It embraces a main machine room properly equipped; a carpenter shop supplied with wood-working machines; a forge room provided with forges and their equipment with blast and exhaust fan and annealing and case-hardening furnace; a foundry room whose equipment consists of a cupola, brass furnace, and core oven with the necessary small tools; a woodwork room supplied with benches, carpenter tools, and wood turning lathes; and a pattern room furnished with the requisite tools.

The Mining and Metallurgical Building contains about ten thousand square feet of floor space. The assay laboratories include a furnace room, a chemical laboratory, and a balance room equipped with all the important types of fire assay apparatus. The ore dressing laboratories include crushing, grinding, sizing, classifying, concentrating, and amalgamating equipment. The metallurgical equipment comprises special types of furnaces and testing apparatus, cyanide plant, pyrometers, and other accessories; and the clay manufactures laboratory is equipped with crushing and moulding machines, dryers and kilns. Special facilities are offered for research.

The Steam and Gas Engineering Laboratory is well equipped with a variety of steam and gas engines, specially arranged for experimental work, and for demonstration of the principles discussed in the classroom. One of the most important of these is a fifty horsepower cross compound steam engine specially arranged for testing with either superheated or saturated steam. Another important item is a fifteen-ton refrigerating plant, consisting of a Corliss engine direct-connected to a horizontal double-acting ammonia compressor. With the above compressor there are installed double pipe condensers and brine coolers, brine tanks, and brine coils.

This laboratory also contains a twenty-five kilowatt steam turbine, a fifty horsepower two-stage air compressor directly con-

nected to a compound condensing engine equipped with the Meyer valve gear; also various other types of steam, gas, gasoline, and hot air engines, automobile engines, and gas producers, and a small vertical boiler and engine. A 150 H. P. electro-dynamometer of the latest type and equipment is worthy of particular mention. This is suitable for testing gasoline and similar engines at any speed up to 3500 revolutions per minute. Special equipment has recently been completed for the measurement of air by a number of different methods. A very complete apparatus for testing the efficiency of shaft bearings of various types has been built in the college shops and is now used by students in regular laboratory courses. The equipment of the University Heating Plant, the Capitol Heating Plant, and the plant of the Madison Gas and Electric Company, are available and are used by the students as part of their regular laboratory work.

Transmission dynamometers, belt testing machines, gear transmission, friction testing machines, etc., are provided for experimental work in the transmission of power.

Excellent facilities are also provided for carrying on engineering research. Special facilities are available to graduate students who wish to pursue advanced research.

The Surveying Laboratory contains all the portable astronomical and field instruments needed for extensive triangulation, topographic, hydrographic, and railroad surveys, including theodolites, altazimuth, tidal gauge, heliotropes, Kern precise-level and new U. S. C. & G. S. precise-level outfits, sounding apparatus, baseline apparatus, including a new "invar" tape, current meters, transits, compasses, levels, planetables, telemeters, and such special instruments as planimeters, pantographs, sextants, computing machines, aneroid barometers, etc. By an agreement with the director of Washburn Observatory, the surveying laboratory shares in the free use of the extensive apparatus belonging to that observatory, including, in addition to the large equatorial telescope and the meridian circle collimators, transit micrometers, chronograph, sidereal and meantime clocks, zenith telescopes, a transit instrument of the broken type, chronometers, an altazimuth, a universal instrument of the German type, spherometer calipers, and a complete set of meteorological instruments.

The Road Material Testing Laboratory contains a standard N. B. M. brick rattler of the latest type, a four-cylinder Deval abrasion machine, a Page impact machine for testing the toughness of rock, a ball machine, a diamond drill, a diamond saw, a standard

machine for testing the cementing power of rocks, and an impact machine for testing the cementing value of rocks.

Arrangements have been made with the Chemical Engineering Department whereby special instruction is given to highway engineers on the chemistry of bituminous materials and excellent opportunities are offered for learning the usual laboratory tests on asphalts, tars, and oils. See Roads and Pavements 104 and Chemical Engineering 121.

The Testing Laboratory is supplied with a 600,000 pound hydraulic universal testing machine (designed in the laboratory) taking tension and compression specimens 10 feet and beams 20 feet long, a Riehle torsion machine taking shafts 15 feet long and 3 inches in diameter, a 100,000 pound Johnson beam machine taking beams 18 feet long, six Olson and Riehle universal machines from 10,000 to 100,000 pounds capacity, a Thurston torsion machine, a Russell impact machine, a Deval abrasion machine, a Dorry abrasion machine, a standard brick rattler, a Brinell hardness tester, several small beam and wire machines, a refrigerator and a gas furnace for freezing and heating tests, a Smith concrete mixer, and a good equipment for tests of cement and plain and reinforced concrete.

The Cement Laboratory contains a full supply of necessary apparatus for making standard tests: baths, self-recording thermometers, Boehme hammer, complete one-thousand-pound Riehle and Fairbanks testing machines, etc.

The Forest Products Laboratory is conducted in cooperation with the work of the University, and offers especially valuable opportunities for Engineering students to carry on advanced study and research pertaining to the utilization of forest products. The equipment of this laboratory is described on p. 445.

The investigative work and equipment of the laboratory include the following divisions of work: (1) Timber Physics, (2) Timber Tests, (3) Wood Preservation, (4) Wood Distillation, (5) Wood Pulp, (6) Chemistry of Wood, and (7) Engineering. The equipment is complete in all respects and is such that it is possible to approximate commercial conditions much more closely than is done in the ordinary laboratory work.

The Paving Material Museum includes an excellent exhibit of paving supplies and samples of both old and new pavements, both foreign and domestic, for use in the courses in Roads and Pavements.

The Engineering Museum contains a collection of models illustrating problems in descriptive geometry, stereotomy, and kinematics, besides many models of bridges and hydraulic structures. There are also numerous industrial exhibitions of engineering interest and value.

A further description of the engineering laboratories and museums may be found in the separate bulletin issued by the College of Engineering.

Courses of Study and Degrees

Courses Leading to the B. S. Degree

The College of Engineering offers five systematic four-year courses leading to the B. S. degree:

- Civil Engineering.
- Mechanical Engineering.
- Electrical Engineering.
- Chemical Engineering.
- Mining Engineering.

Students who complete any of the above four-year courses are graduated with the degree of Bachelor of Science, the diploma containing a specific designation of the course taken.

The above courses may also be taken as five-year courses leading to the B. S. degree. The additional year will make it possible to include a large amount of work in the College of Letters and Science.

Graduate Work

The graduate work in the College of Engineering is a part of the Graduate School of the University, and is in charge of an administrative committee. Excellent opportunities are offered in the various departments for advanced theoretical work and for research. A special fund is available to be devoted exclusively to experimental work in the engineering laboratories.

The degrees of Civil Engineer, Mechanical Engineer, Electrical Engineer, Chemical Engineer, and Engineer of Mines are conferred as second degrees (a) upon graduates of approved institutions who have completed suitable undergraduate courses and who pursue advanced professional study at the University for one year or more

and present a satisfactory thesis; (b) upon graduates of the College of Engineering of the University of Wisconsin who have spent three years in professional work, at least one of which must have been in a position of responsibility, and who present satisfactory theses.

The degrees of Master of Science and Doctor of Philosophy are conferred upon graduates of the Engineering courses under the same requirements as apply to graduates of the College of Letters and Science. For a statement of these requirements see Index under Degrees.

Six-Year Courses Leading to the B. A. Degree and an Engineering Degree

By properly arranging their elective studies, students in the College of Letters and Science secure the B. A. degree at the end of four years, and the B. S. degree in Engineering in two additional years. These students will register in the College of Letters and Science during the first four years of residence. They will elect during their collegiate course the studies of the first two years of the engineering course which they plan to pursue later, with the exception of shop work. This may be taken as an extra study, or may be taken during vacation time. Upon receiving the B. A. degree they will be admitted as juniors in the College of Engineering.

By utilizing the opportunities offered in the summer session students may in most cases secure the professional degree at the end of the sixth year.

Modern Language Requirements in all Engineering Courses

When two years of French or German are presented for entrance an additional year of foreign language is required. The foreign language offered for entrance should preferably be continued in the University.

When three years of one foreign language or four years of two or more foreign languages are accepted for entrance no additional foreign language is required.

Students who present the required number of units for entrance and who are graduates of accredited schools will be admitted without a preparation in foreign language, but subject to a condition in the same. In this case there are required sixteen semester hours in French, German, or Spanish. If French be taken and an average mark of 85 or over be made for the first eight credits, then the remaining eight credits may be taken in another foreign language.

Summer Vacation Work

All Engineering students are required to take summer vacation work in addition to the work of the four academic years. For civil engineering students this work consists of four weeks of field work, following either the sophomore or the junior year. For mechanical engineers the equivalent of four credits of industrial practice is required. The electrical engineers are required to take four weeks of approved summer work in an engineering or industrial organization. The summer work for chemical engineers consists of a course in chemical manufacture, Chemical Engineering 114. The mining engineers are required to take six weeks of surveying, following either the freshman or sophomore year, and at least one month of mining work following the junior or senior years.

Inspection Trips

Inspection trips, for visiting industrial plants, are required of all Engineering students during the junior or senior year. They are arranged and conducted by members of the faculty of the various departments and are designed to illustrate the work of the several courses.

The electrical and mechanical engineers take the trip in the autumn of the senior year. The student has the choice between the eastern trip, including usually Chicago, Niagara Falls, Buffalo, Pittsburg, Cleveland, and Gary, and the western trip, including Milwaukee, Chicago, and cities in the near vicinity. Each of these trips lasts a week.

The civil engineers visit the cities of Chicago and Milwaukee, one in the spring of the junior year, the other in the autumn of the senior year. Each of these trips takes three to four days.

The chemical engineers made a week's visit to Milwaukee, Chicago, and points near by in the autumn of the senior year.

The mining engineers make their inspection trip in connection with their required summer course (see Mining and Metallurgy 110).

Thesis

According to the university rule every candidate for a bachelor's degree must present a thesis or its equivalent. In the College of Engineering wide latitude is allowed both in the choice of subject and method of treatment. The thesis may take the form of library work, laboratory research, design or special problems.

Freshman Lectures

The College has provided for a course of lectures for freshmen. Attendance is required. In the lectures of this course the aim is to give the student a more adequate conception of the work of the engineer, to make clearer the kind of training which furnishes the best preparation for the practice of the engineering profession, and to call attention to the methods of study which have been found to produce satisfactory results. The course also includes several lectures on subjects of more general interest.

Special Lecturers

It is the practice of the College to provide each year a number of lectures on various phases of engineering practice. These lectures are for the most part given by prominent nonresident engineers and professors; some are given by Wisconsin professors. Their purpose is to enliven the interest of the student and to broaden his horizon, rather than to give specific instruction. The following lectures were given during the academic years 1914-15 and 1915-16:

Life of John Ericsson—Professor J. G. D. Mack, University of Wisconsin.

Some Personal Experiences with Patents—C. F. Burgess, Consulting Chemical Engineer, Madison, Wis.

Steel—Bradley Stoughton, Secretary, American Institute of Mining Engineers.

Development of Large Gas Engines in America—E. T. Adams, Consulting Mechanical Engineer, Detroit, Mich.

Raising the Maine—Major A. B. Ferguson, U. S. Engineer, Milwaukee, Wis.

Experiences in China—Professor D. W. Mead, University of Wisconsin.

Evolution of Steam Tables—Professor G. A. Goodenough, University of Illinois.

Archimedes as an Engineer—Professor C. S. Slichter, University of Wisconsin.

Electrical Equipment of the Locks of the Panama Canal—Edward Schildauer, formerly Chief Mechanical Engineer, Panama Canal Commission.

Possibility of Fire from¹ Locomotive Sparks—Professor L. W. Wallace, Purdue University.

Water Supply Engineering—Allen Hazen, Consulting Engineer, New York City.

Modern Excavating Machinery—G. A. Morrison, Designing Engineer, Bucyrus Co., Milwaukee, Wis.

Future of the Central Station—Samuel Insull, President, Commonwealth Edison Co., Chicago, Ill.

Some Phases of Ancient Achievement—Professor Grant Showerman, University of Wisconsin.

Water Power versus Scenic Grandeur at Niagara Falls—Dean Francis C. Shenhon, University of Minnesota.

Some Mechanical Analogies in Electricity and Magnetism—Professor W. S. Franklin, formerly at Lehigh University.

Present Problems in Electro-Chemistry and Electro-Metallurgy—Professor Joseph W. Richards, Lehigh University.

Water Power and Industrial Development in Norway—A. B. Wilse, Lecturer.

The Great Telescopes of the World and the Discoveries Made by Their Use—Dr. John A. Brashear, past president of the American Society of Mechanical Engineers, and manufacturer of astronomical and physical instruments.

OUTLINE OF ENGINEERING COURSES

CIVIL ENGINEERING COURSE

Leading to the B. S. Degree

FRESHMAN YEAR

FIRST SEMESTER		Credits
*Foreign Language.....	German, French, or Spanish.....	4
Mathematics 51.....	Algebra.....	5
Drawing 1.....	Elements of Drawing.....	3
Chemistry 2.....	General Chemistry and Qualitative Analysis.....	3
Topographical Engr. 1.....	Elements of Surveying and Mapping.....	2
Physical Education.....	.....	1
Military Science.....	.....	1
Freshman lectures.....	.....	0
Total.....		19

SECOND SEMESTER

*Foreign Language.....	German, French, or Spanish.....	4
Mathematics 52.....	Trigonometry and Analytical Geometry.....	5
Drawing 2.....	Elements of Drawing.....	3
Chemistry 2.....	General Chemistry and Qualitative Analysis.....	3
Topographical Engr. 2.....	Elementary Surveying and Mapping.....	2
Physical Education.....	.....	1
Military Science.....	.....	1
Freshman lectures.....	.....	0
Total.....		19

SOPHOMORE YEAR

FIRST SEMESTER		Credits
Mathematics 54.....	Calculus.....	4
Physics 51.....	General Lectures and Laboratory Practice.....	5
Drawing 3.....	Descriptive Geometry.....	3
Topographical Engr. 3.....	Land Surveying and Mapping.....	3
Railway Engr. 1.....	Railway Curves.....	2
Physical Education.....	.....	1
Military Science.....	.....	1
Total.....		19

SECOND SEMESTER

Mathematics 55.....	Differential and Integral Calculus.....	4
Physics 52.....	General Lectures and Laboratory Practice.....	5
Mechanics 1, 2.....	Statics, Mechanics of Materials.....	5
Topographical Engr. 4.....	Advanced Surveying and Mapping.....	4
Physical Education.....	.....	1
Military Science.....	.....	1
Total.....		20

Summer work, 4 weeks.

* Students entering with advanced language preparation (three years of one foreign language or four years of two or more foreign languages) have completed the foreign language requirements. These students will substitute (a) English in the freshman year for foreign language, (b) an elective for English in the junior year, and (c) take two credits additional elective.

A total of 154 credits and 154 grade points (see p. 81) exclusive of summer work is required for graduation.

JUNIOR YEAR

FIRST SEMESTER		Credits
Mechanics 3.....	Mechanics of Materials.....	5
Mechanics 51.....	Materials of Construction.....	2
Hydraulic Engr. 2.....	Hydraulics.....	4
Railway Engr. 2.....	Railway Location and Construction.....	2
Railway Engr. 22.....	Practice in Field and Office Work.....	3
*English 1 E.....		3
Total.....		19

SECOND SEMESTER

Mechanics 52.....	Materials of Construction.....	2
Hydraulic Engr. 110.....	Hydrology.....	2
Railway Engr. 103.....	Maintenance of Way.....	2
Railway Engr. 110.....	Masonry Construction.....	2
Structural Engr. 2.....	Bridge Stresses, Simple Structures.....	4
Steam & Gas Engr. 7.....	Engines and Boilers.....	2
*English 1 E.....		3
Elective.....		3
Total.....		20

SENIOR YEAR

FIRST SEMESTER		Credits
Structural Engr. 3.....	Steel Structures. Roof Truss and Plate Girder Design.....	4
Structural Engr. 105.....	Concrete Structures. Analysis of Stresses.....	2
Steam and Gas 127.....	Calibration of Instruments.....	2
Hydraulic Engr. 111.....	Water Supply.....	3
Electrical Engr. 131a.....	Direct Current Machinery.....	2
Electrical Engr. 130.....	Direct Current Laboratory.....	1
Electives.....		5
Total.....		19

SECOND SEMESTER

Structural Engr. 4.....	Steel Structures. Railway Bridge. Truss Design.....	3
Railway Engr. 111.....	Substructures.....	1
Structural Engr. 111.....	Concrete Structures. Analysis of Stresses.....	2
Engr. Contracts.....	Contracts and Specifications.....	2
Hydraulic Engr. 114.....	Rivers and Canals.....	1
Electrical Engr. 131b.....	Alternating Current Machinery.....	1
Electrical Engr. 130.....	Direct Current Laboratory.....	2
Thesis and Electives.....		7
Total.....		19

Highway Engineering Group of Electives

Junior Year—Geology 1, 2a, Roads and Pavements 102.

Senior Year—Roads and Pavements 103, 104.

Structural Engineering 112.

Sanitary Engineering Group of Electives

Junior Year—Water Analysis.

Senior Year—Bacteriology.

Hydraulic Engineering 112, 113a and 113b.

* See footnote, page 280.

MECHANICAL ENGINEERING COURSE

Leading to the B. S. Degree

FRESHMAN YEAR

FIRST SEMESTER		Credits
*Foreign Language.....	German, French, or Spanish.....	4
Mathematics 51.....	Algebra.....	5
Drawing 1.....	Elements of Drawing.....	3
Chemistry 2.....	General Chemistry and Qualitative Analysis.....	3
Shop Work, 1, 2, 3.....	Pattern Making, Bench and Forge Work.....	2
Physical Education.....	.....	1
Military Science.....	.....	1
Freshman Lectures.....	.....	0
Total.....		19

SECOND SEMESTER

*Foreign Language.....	German, French, or Spanish.....	4
Mathematics 52.....	Trigonometry and Analytical Geometry.....	5
Drawing 2.....	Elements of Drawing.....	3
Chemistry 2.....	General Chemistry and Qualitative Analysis.....	3
Shop Work 4, 5.....	Lathe Work in Metals. Planing and Milling.....	2
Physical Education.....	.....	1
Military Science.....	.....	1
Freshman Lectures.....	.....	0
Total.....		19

SOPHOMORE YEAR

FIRST SEMESTER		Credits
Mathematics 54.....	Differential and Integral Calculus.....	4
Physics 51.....	General Lectures and Laboratory Practice.....	5
Machine Design 1.....	Mechanism.....	4
Shopwork 6, 13.....	Tool Making and Foundry Practice.....	3
Physical Education.....	.....	1
Military Science.....	.....	1
Total.....		18

SECOND SEMESTER

Mathematics 55.....	Differential and Integral Calculus.....	4
Physics 52.....	General Lectures and Laboratory Practice.....	5
Drawing 3.....	Descriptive Geometry.....	3
Machine Design 2.....	Valve Gears.....	1
Mechanics 1, 2.....	Statics, Mechanics of Materials.....	5
Physical Education.....	.....	1
Military Science.....	.....	1
Total.....		20

The equivalent of four credits of Industrial Practice. See Shop Work, Course 10.

* Students entering with advanced language preparation (three years of one foreign language or four years of two or more foreign languages) have completed the foreign language requirements. These students will substitute (a) English in the freshman year for foreign language, (b) an elective for English in the junior year, and (c) take two credits additional elective.

A total of 154 credits and 154 grade points (see p. 81) exclusive of Industrial Practice is required for graduation.

JUNIOR YEAR

FIRST SEMESTER		Credits
Mechanics 3.....	Mechanics of Materials.....	5
Mechanics 53.....	Materials of Construction.....	2
Steam and Gas 1.....	Elementary Thermodynamics.....	4
Machine Design 3.....	Machine Elements.....	4
Machine Design 11.....	Testing Machines and Machine Elements.....	1
Shop Work 7.....	General Shop Work.....	2
*English 1 E.....		3
Total.....		21

SECOND SEMESTER

Steam and Gas 22.....	Heat Engine Testing.....	2
Steam and Gas 2.....	Elementary Thermodynamics.....	4
Hydraulic Engr. 1.....	Hydraulics.....	3
Machine Design 4.....	Advanced Machine Design.....	4
Machine Design 12.....	Testing Machines and Machine Elements.....	1
Electrical Engr. 103a.....	Electrotechnics.....	3
*English 1 E.....		3
Total.....		20

SENIOR YEAR

FIRST SEMESTER		Credits
Steam and Gas 105.....	Steam and Gas Engine Calculations.....	2
Steam and Gas 23.....	Testing of Heat Engines.....	2
Comm. Mech. Engr. 101.....	Commercial Mechanical Engineering.....	3
Electrical Engr. 103b.....	Direct Current Machinery.....	3
Electrical Engr. 130.....	Direct Current Laboratory.....	2
Shop Work 12.....	Manufacturing Methods.....	1
†Electives.....		6
Total.....		19

SECOND SEMESTER

Comm. Mech. Engr. 102.....	Power Plant Design.....	2
Steam and Gas 124.....	Advanced Heat Engine Testing.....	1
Electrical Engr. 132.....	Alternating Current Laboratory.....	2
Shopwork 8, 9.....	Heat Treatment of Steels and Pattern Work.....	2
Machine Design 100.....	Advanced Machine Design.....	2
Thesis and Electives.....		9
Total.....		18

* See footnote, page 282.

† Must include Water Power, 3 credits, first semester, or Hydraulic Machinery, 2 credits, second semester.

ELECTRICAL ENGINEERING COURSE

Leading to the B. S. Degree

FRESHMAN YEAR

FIRST SEMESTER		Credits
*Foreign Language.....	German, French, or Spanish.....	4
Mathematics 51.....	Algebra.....	5
Drawing 1.....	Elements of Drawing.....	3
Chemistry 2.....	General Chemistry and Qualitative Analysis.....	3
Shop Work 1, 2, 3.....	Pattern Making, Bench and Forge Work.....	2
Physical Education.....	.....	1
Military Science.....	.....	1
Freshman Lectures.....	.....	0
Total.....		19

SECOND SEMESTER

*Foreign Language.....	German, French, or Spanish.....	4
Mathematics 52.....	Trigonometry and Analytical Geometry.....	5
Drawing 2.....	Elements of Drawing.....	3
Chemistry 2.....	General Chemistry and Qualitative Analysis.....	3
Shop Work 4, 5.....	Lathe Work in Metals. Planing and Milling.....	2
Physical Education.....	.....	1
Military Science.....	.....	1
Freshman Lectures.....	.....	0
Total.....		19

Four weeks of approved summer experience in an engineering or industrial organization.

SOPHOMORE YEAR

FIRST SEMESTER		Credits
Mathematics 54.....	Differential and Integral Calculus.....	4
Physics 53.....	General Lectures and Introductory Lab. Practice.....	3
Drawing 3.....	Descriptive Geometry.....	3
Elect. Engr. 140a.....	Introductory Course.....	3
*English 1 E.....	.....	3
Physical Education.....	.....	1
Military Science.....	.....	1
Total.....		18

SECOND SEMESTER

Mathematics 55.....	Differential and Integral Calculus.....	4
Physics 54a.....	General Lectures and Introductory Lab. Practice.....	3
Machine Design 1.....	Mechanism.....	4
Elect. Engr. 140b.....	Introductory Course.....	4
*English 1 E.....	.....	3
Physical Education.....	.....	1
Military Science.....	.....	1
Total.....		20

* Students entering with advanced language preparation (three years of one foreign language or four years of two or more foreign languages) have completed the foreign language requirements. These students will substitute (a) English in the freshman year for foreign language, (b) an elective for English in the sophomore year, and (c) take two credits additional elective.

A total of 164 credits and 184 grade points (see p. 81) exclusive of summer work is required for graduation.

JUNIOR YEAR

FIRST SEMESTER		Credits
*Physics 55.....	Adv. Electricity and Magnetism.....	3
Mechanics 1 and 2.....	Statics and Dynamics.....	5
Steam and Gas 3a.....	Special Course in Thermodynamics.....	3
Elect. Engr. 141.....	Direct Current Machinery.....	3
Elect. Engr. 142.....	Alternating Current Circuits.....	2
Elect. Engr. 102.....	Direct Current Laboratory.....	2
Shopwork.....		2
Total.....		20

SECOND SEMESTER		Credits
*Physics 56.....	Advanced Electricity and Light.....	3
Mechanics 3.....	Mechanics of Materials.....	5
Steam and Gas 3b.....	Special Course in Thermodynamics.....	3
Steam and Gas 23.....	Laboratory.....	2
Elect. Engr. 143a.....	Alternating Current Machinery.....	2
Elect. Engr. 112a.....	Alternating Current Machinery Laboratory.....	2
Hydraulic Engr. 1.....	Elementary Hydraulics.....	3
Total.....		20

SENIOR YEAR

FIRST SEMESTER		Credits
Mechanics 53.....	Materials of Construction.....	2
Elect. Engr. 143b.....	Alt. Current Machinery.....	3
Elect. Engr. 112b.....	Alternating Current Mach. Laboratory.....	2
†Elect. Engr. 125.....	Conference.....	2
Machine Design 5.....	Machine Elements.....	3
Elect. Engr.	From Electrical Group.....	2
Thesis and Electives.....		6
Total.....		19

SECOND SEMESTER		Credits
Elect. Engr.	Electrical Group.....	5
†Contracts.....	Contracts and Specifications.....	2
Topographic Engr. 108.....	Short Course for Mech. & Elect. Engrs.....	3
Thesis and Electives.....		9
Total.....		19

ELECTIVE ELECTRICAL GROUP

FIRST SEMESTER		Credits
Elect. Engr. 127.....	Central Stations and Industrial Applications.....	3
Elect. Engr. 133.....	Photometry and Illumination.....	2
Chem. Engr.	Electrochemistry.....	3
Elect. Engr. 116.....	Electric Circuits.....	3
SECOND SEMESTER		Credits
Elect. Engr. 104.....	Dynamo Design.....	2
Elect. Engr. 129.....	Elect. Railways.....	2
Elect. Engr. 135.....	Telephony.....	2
Elect. Engr. 137.....	Power Transmission and Insulation.....	3
Elect. Engr. 122.....	Electric Testing.....	2

* Physics 55 and 56 to be given beginning year 1918.

† Elect. Engr. 125 may be taken either semester.

† Commercial Law or Commercial Mechanical Engr. may be substituted.

CHEMICAL ENGINEERING COURSE

Leading to the B. S. Degree

FRESHMAN YEAR

FIRST SEMESTER		Credits
*Foreign Language.....	German, French, or Spanish.....	4
Mathematics 51.....	Algebra.....	5
Drawing 1.....	Elements of Drawing.....	3
Chemistry 2.....	General Chemistry and Qualitative Analysis.....	3
Shop Work 1, 2, 3.....	Pattern Making, Bench Work and Forge Work.....	2
Physical Education.....	.....	1
Military Science.....	.....	1
Freshman Lectures.....	.....	0
Total.....		19

SECOND SEMESTER

*Foreign Language.....	German, French, or Spanish.....	4
Mathematics 52.....	Trigonometry and Analytical Geometry.....	5
Drawing 2.....	Elements of Drawing.....	3
Chemistry 2.....	General Chemistry and Qualitative Analysis.....	3
Shop Work 4, 5.....	Lathe Work in Metals, Planing and Milling.....	2
Physical Education.....	.....	1
Military Science.....	.....	1
Freshman Lectures.....	.....	0
Total.....		19

SOPHOMORE YEAR

FIRST SEMESTER		Credits
Mathematics 54.....	Differential and Integral Calculus.....	4
Physics 51.....	General Lectures and Laboratory Practice.....	5
Chemistry 11.....	Quantitative Analysis.....	5
Machine Design 1.....	Mechanism.....	4
Physical Education.....	.....	1
Military Science.....	.....	1
Total.....		20

SECOND SEMESTER

Mathematics 55.....	Differential and Integral Calculus.....	4
Physics 52.....	General Lectures and Laboratory Practice.....	5
Chemical Engr. 12.....	Gas and Fuel Analysis.....	2
Chemical Engr. 18.....	Engineering Materials.....	2
Mechanics 1, 2.....	Statics, Dynamics.....	5
Physical Education.....	.....	1
Military Science.....	.....	1
Total.....		20

* Students entering with advanced language preparation (three years of one foreign language or four years of two or more foreign languages) have completed the foreign language requirements. These students will substitute (a) English in the freshman year for foreign language, (b) an elective for English in the junior year, and (c) take two credits additional elective.

A total of 154 credits and 154 grade points (see p. 81) exclusive of summer work is required for graduation.

JUNIOR YEAR

FIRST SEMESTER		Credits
Mechanics 3.....	Mechanics of Materials.....	5
Steam and Gas 3a.....	Elementary Thermodynamics.....	3
Chemistry 120.....	Organic Chemistry.....	3
*English 1 E.....	.....	3
Chemical Engr. 117.....	Technical Pyrometry.....	2
Chemical Engr. 119.....	Metallography.....	3
Total.....		19

SECOND SEMESTER

Steam and Gas 3b.....	Elementary Thermodynamics.....	3
Steam and Gas 25.....	Engr. Testing.....	2
Elect. Engr. 131a.....	Elements of Elect. Engr.....	2
Chemistry 120.....	Organic Chemistry.....	3
Drawing 3.....	Descriptive Geometry.....	3
*English 1 E.....	.....	3
Chemical Engr. 111.....	Chemical Machinery.....	2
Mechanics 53.....	Materials of Construction.....	2
Total.....		20

Summer work, Chemical Engineering 114 (Chemical manufacture), the equivalent of 4 credits.

SENIOR YEAR

FIRST SEMESTER		Credits
Steam and Gas 26.....	Testing Heat Engines.....	1
Elect. Engr. 131b.....	Elements of Electrical Engr.....	2
Elect. Engr. 130.....	Testing Direct Current Mach.....	2
Chemistry 130.....	Physical Chemistry.....	3
Chem. Engr. 101.....	Electrochemistry.....	5
Chem. Engr. 15.....	Industrial Chemistry.....	3
Chem. Engr. 116.....	Applied Thermal Chem.....	2
Electives.....	.....	2
Total.....		20

SECOND SEMESTER

Contracts.....	Contracts and Specifications.....	2
Mach. Design 5.....	Machine Elements.....	3
Chemical Engr. 116.....	Applied Thermal Chemistry.....	2
Chemical Engr. 120.....	Industrial Organic Chemistry.....	2
Thesis and Electives.....	.....	8
Total.....		17

* See footnote bottom of page 286.

COURSES IN MINING, METALLURGY, AND GEOLOGY

Leading to the B. S. Degree

FRESHMAN YEAR

FIRST SEMESTER		Credits
*Foreign Language.....	German, French, or Spanish.....	4
Mathematics 51.....	Algebra.....	5
Drawing 1.....	Elements of Drawing.....	3
Chemistry 2.....	General Chemistry and Qualitative Analysis.....	3
(Shop Work 1, 2, 3 or Topographical Engr. 2.....)	Pattern Making, Bench and Forge Work.....	2
Physical Education.....	General Surveying.....	1
Military Science.....	.....	1
Freshman Lectures.....	.....	0
Total.....		19

SECOND SEMESTER

*Foreign Language.....	German, French, or Spanish.....	4
Mathematics 52.....	Trigonometry and Analytical Geometry.....	5
Drawing 2.....	Elements of Drawing.....	3
Chemistry 2.....	General Chemistry and Qualitative Analysis.....	3
(Shop Work 4, 5 or..... Topographical Engr. 2.....)	Lathe Work in Metals, Planing and Milling.....	2
Physical Education.....	General Surveying.....	1
Military Science.....	.....	1
Freshman Lectures.....	.....	0
Total.....		19

Summer School Surveying, 6 weeks.

SOPHOMORE YEAR

FIRST SEMESTER		Credits
Mathematics 54.....	Differential and Integral Calculus.....	4
Physics 51.....	General Lectures and Laboratory Practice.....	4
Geology 6.....	General Mineralogy.....	5
Chemistry 11.....	Quantitative Analysis.....	5
Physical Education.....	.....	1
Military Science.....	.....	1
Total.....		30

SECOND SEMESTER

Mathematics 55.....	Differential and Integral Calculus.....	4
Physics 52.....	General Lectures and Laboratory Practice.....	4
Mechanics 1, 2.....	Statics, Mechanics of Materials.....	5
Drawing 3.....	Descriptive Geometry.....	3
Physical Education.....	.....	1
Military Science.....	.....	1
Total.....		18

* Students entering with advanced language preparation (three years of one foreign language or four years of two or more foreign languages) have completed the foreign language requirements. These students will substitute (a) English in the freshman year for foreign language, (b) an elective for English in the junior year, and (c) take two credits additional elective.

A total of 184 credits and 154 grade points (see p. 81) exclusive of summer work is required for graduation.

COURSES IN MINING, METALLURGY, AND GEOLOGY 289

JUNIOR YEAR

FIRST SEMESTER		Credits
Geology 1.....	General Geology.....	5
Mining 101.....	Excavation.....	3
Mechanics 3.....	Mechanics of Materials.....	5
Steam and Gas 3a or.....	Elementary Thermodynamics.....	3
†Geology 111.....	Economic Geology.....	3
English 1 E.....		
Total.....		19

SECOND SEMESTER

Mining 102.....	Tunneling and Shaft Sinking.....	3
Mechanics 53.....	Materials of Construction.....	2
Steam and Gas 127.....	Short Course in Testing.....	2
†Geology 111 or.....	Economic Geology.....	3
Hydraulic Engr. 1.....	Hydraulics.....	3
English 1 E.....		3
Electives.....		6
Total.....		19

Summer Western Mining Trip. See Mining 110.

SENIOR YEAR

FIRST SEMESTER		Credits
Mining 103, 105.....	Exploitation and Mine Engineering.....	5
Mining 123.....	General Metallurgy.....	3
Steam and Gas 3a or.....	Elementary Thermodynamics.....	3
†Geology 111.....	Economic Geology.....	3
Electives.....		9
Total.....		20

SECOND SEMESTER

Mining 105, 107.....	Ore Dressing and Mine Engineering.....	6
Mining 123.....	Metallurgy of Copper and Lead.....	3
Hyd. Engr. 1 or.....	Hydraulics.....	3
†Geology 111.....	Economic Geology.....	3
Contracts.....	Contracts and Specifications.....	2
Thesis and Electives.....		6
Total.....		20

Of the 21 credits elective, 15 must be taken from one of the following groups:

Mining Group

Railway Engr. 104.....	2
Structural Engr. 10.....	2
Electrical Engr.....	2
Steam and Gas Engr.....	6
Mining Engr.....	3

Metallurgical Group

Metallurgy.....	6 or 9
Chemical Engr.....	6 or 9

Geological Group

Geology.....	} 15 credits
Mineralogy.....	
Petrology.....	

* See footnote, page 288.

† Given 1916-17 and alternating yearly with Steam and Gas or Hydraulic courses.

Combination Engineering and Commerce Course

By electing the following group of studies in economics, students pursuing the five-year course may get all the essential studies of the Course in Commerce, together with a full engineering course.

First year: Physiography and Physical Geography, 3 credits.

Second year: Elementary Economics, 3 credits; Commercial Geography, 3 credits for each of two semesters.

Third year: Money and Banking and Transportation, 3 credits; Commercial Law, 4 credits.

Fourth year: Elective group, 3 credits; Business Administration, 2 credits.

Fifth year: Business Administration, 2 credits; Group and Thesis, 4 credits (if the thesis is taken in Commerce).

Elective for Students in the College of Letters and Science

Students who plan to graduate in Engineering, after taking a degree in the College of Letters and Science, should aim to make the following elections during the undergraduate course, in order that the engineering course may be completed in two additional years:

Mathematics 51 to 55; Physics 1 or 51 and 52; Chemistry 1 or 2; Mechanical Drawing, 1, 2, and 3; Topographical Engineering 2, 3, and 4, or Machine Design 1; Applied Mechanics 1 and 2.

It is well also to elect some or all of the freshman and sophomore shop work, as an extra study.

Graduation in More than One of the Engineering Courses

Graduates in any of the Engineering courses may graduate in any other Engineering course after one year of additional study. Students who contemplate doing this should, however, make their elections, especially in the senior year, with this end in view.

DEPARTMENTS OF INSTRUCTION

Abbreviations in the announcement of courses: Yr., throughout the year; I, given during the first semester; II, given during the second semester; I or II, given each semester; cr., credits, i. e., hours of credit. Unless otherwise stated, the number of credits per semester is given.

The unit of reckoning the credit is one hour of classroom work per week. Two hours of drawing, laboratory, field, or shop work (which require no outside preparation) count as one hour of classroom work.

COURSES GIVEN IN THE COLLEGE OF LETTERS AND SCIENCE

For detailed description of courses given in the College of Letters and Science see Index under Astronomy, Bacteriology, Chemistry, Chemistry of Forest Products, English, Forestry and Wood Technology, French, Geology, German, Mathematics, Meteorology, Physics, Political Economy, and Spanish.

COURSES GIVEN IN THE COLLEGE OF ENGINEERING

AERONAUTICS

PROFESSORS MAURER, CALLAN.

1. **Aeronautics.** I; 2 cr. Historical sketch of the development of air craft; the researches on lift and drag of airplane wings, and on head resistance; mechanics of uniform flight; power required; motors; air screws; air conditions. Mr. Maurer, Mr. Callan.

2. **Aeronautics.** II; 2 cr. Stresses in main members of airplanes and in air screws; inherent stability and automatic stabilizers; design of aviation engines. Mr. Maurer, Mr. Callan.

CHEMICAL ENGINEERING

ASSOCIATE PROFESSOR KOWALKE; ASSISTANT PROFESSORS HECKER, WATTS; INSTRUCTORS BAIN, VALENTINE.

For Undergraduates

4. Applied Electrochemistry. I; 3 cr. Short course for juniors and seniors; not open to chemical engineers. Mr. Watts.

12a. Fuel and Gas Analysis. I or II; 2 cr. Gas, coal, and oil. Prerequisites: Chemistry 2, 11. Mr. Valentine.

12b. Advanced Analysis. I or II; cr. to be arranged. Continuation of 12a. Mr. Valentine.

15. Industrial Chemistry. I; 3 cr. Technology of important chemical industries. Prerequisites: Chemistry 2, 11, Chemistry 120 or enrollment in same. Mr. Kowalke.

18. Engineering Materials. II; 2 cr. Technology of limes, cements, refractories, fuel, and iron and steel. Prerequisite: Chemistry 2. Mr. Hecker.

For Undergraduates and Graduates

101a. Applied Electrochemistry. I; 5 cr. Principles and applications to electroplating and manufacture. Mr. Watts, Mr. Hecker.

101b. Advanced Electrochemistry. II; 1 or more cr. Mr. Watts.

102. Electric Furnace. II; 3 cr. Construction, operation, applications. Mr. Watts, Mr. Hecker.

106. Batteries. II; 2 cr. Principles, construction, testing. Mr. Watts.

111. Chemical Machinery. II; 2 cr. Principles of construction and operation. Mr. Kowalke.

113. Gas Manufacture and Distribution. II; 3 cr. Coal, carburetted water, oil, and producer gas, by-products. Mr. Kowalke.

114a. Chemical Manufacture. I; 4 cr. Manufacture of products; tests of machinery. Prerequisites: Chemistry 2, 11, course 111. Required of chemical engineers as summer work, elective for others. Mr. Kowalke, Mr. Hecker.

114b. Advanced Chemical Manufacture. II; 2 or more cr. Special problems. Mr. Kowalke.

116. Applied Thermal Chemistry. Yr.; 4 cr. Combustion, chemical and metallurgical processes. Mr. Kowalke.

117a. Technical Pyrometry. I; 2 cr. Calibration and use of pyrometers; thermal analysis of steel and compounds. Prerequisites: Chemistry 2, Physics 51, 52. Mr. Kowalke, Mr. Bain.

117b. Advanced Pyrometry. II; 1 or more cr. Continuation of 117a. Mr. Kowalke, Mr. Bain.

119a. Metallography. I or II; 3 cr. Constitution of metals and alloys and their microscopic examination; tool and alloy steels. Prerequisites: Chemistry 2, Physics 1, 2, or 51. Mr. Bain, Mr. Hecker.

119b. Advanced Metallography. I or II; cr. to be arranged. Special problems. Mr. Bain, Mr. Hecker.

120. Industrial Organic Chemistry. II; 2 cr. Technology of organic chemical industries. Prerequisites: Chemistry 120. Mr. Hecker.

121. Analysis of Highway Bitumens. II; 2 cr. Oils, asphalts, asphaltic petroleum, tars. Mr. Hecker.

For Graduates

230. Chemical Engineering Research. Hours and credit by arrangement. Individual problems, conferences, and reports. Mr. Kowalke, Mr. Watts.

231. Seminary. Presentation and discussion of technical papers. Mr. Kowalke.

CITY PLANNING

ASSOCIATE PROFESSOR L. S. SMITH.

For Undergraduates and Graduates

101. City Planning. I; 2 cr. Housing questions; planning garden and industrial towns; planning and replanning of American cities. No prerequisites. Mr. Smith.

102. City Planning. II; 2 cr. Continuation of 101 with applications to housing operations and practical planning of land, traffic problems, terminals. Mr. Smith.

COMMERCIAL MECHANICAL ENGINEERING

PROFESSORS MACK*, CALLAN; ASSISTANT PROFESSOR GODDARD;
INSTRUCTOR HYLAND.

For Undergraduates and Graduates

101. Commercial Problems. I; 3 cr. Patent practice, patent records; inventories, valuations, and shop costs. Mr. Callan, Mr. Goddard.

102. Power Plant Design. II; 2 cr. Lectures on design; individual design of complete plant. Mr. Callan, Mr. Hyland.

103. Industrial Engineering. II; 2 cr. Organization and management. Mr. Callan, Mr. Goddard, Mr. Mack and special lecturers.

104. Mechanical Engineering Seminary. II; 1 cr. Preparation and discussion of papers on engineering and industrial problems. Open to seniors. Mr. Callan.

DRAWING

PROFESSOR PHILLIPS; ASSISTANT PROFESSORS MILLAR, ORTH;
INSTRUCTORS GRENOBLE, MARKWARDT, THOMAS.

For Undergraduates

1. Elements of Drawing. I or II; 3 cr. Third angle projection; lettering, tracing, blueprinting; working drawings. Mr. Phillips, Mr. Orth, Mr. Thomas, Mr. Grenoble, Mr. Markwardt.

2. Elements of Drawing. I or II; 3 cr. Lettering, sketching; isometric and cabinet drawing; working drawings. Prerequisite: course 1. Mr. Phillips, Mr. Orth, Mr. Thomas, Mr. Grenoble.

3. Descriptive Geometry. I or II; 3 cr. Generation and classification of lines and surfaces; tangent planes; sections, intersections and developments. Prerequisites: courses 1, 2. Mr. Millar, Mr. Markwardt.

4. Freehand Lettering. I or II; 1 cr. Prerequisites: courses 1, 2. Mr. Orth, Mr. Thomas.

*On leave of absence 1916-17.

ELECTRICAL ENGINEERING

PROFESSORS BEEBE, BENNETT; ASSISTANT PROFESSORS DISQUE, PRICE, SHUSTER, WATSON; INSTRUCTORS CROTHERS, GRAY, KARTAK, KELSO, LANGE.

101a. Direct Current Machinery. I; 4 cr. Laws of the electric and magnetic circuits; construction and operation of direct current machinery. Prerequisites: Mathematics 55, Physics 52. Mr. Watson.

101b. Direct Current Machinery. II; 2 cr. Continuation of 101a. Mr. Watson.

102. Dynamo Laboratory. Tests of direct current dynamos and appliances. Prerequisite: course 101a. Mr. Price and laboratory instructors.

103. Alternating Current Machinery. I; 3 cr. Prerequisite 144. Mr. Beebe.

104. Dynamo Design. I; 2 cr. Individual design of a direct current dynamo. Prerequisite: course 101a. Mr. Watson.

111. Alternating Current Theory. II; 3 cr. Fundamental laws. Mr. Watson.

112a. Alternating Current Laboratory. I; 2 cr. Tests of generators, motors, transformers, meters, and appliances. Prerequisite: course 111. Mr. Price and laboratory instructors.

112b. Advanced Laboratory. II; 2 cr. Continuation of 112a.

113a. Alternating Current Machinery. I; 3 cr. Generator, synchronous motor, and synchronous converter. Prerequisite: course 111. Mr. Disque.

113b. Alternating Current Machinery. II; 2 cr. Transformers, induction motors, commutator motors. Mr. Beebe.

116. Electric Circuits. I; 3 cr. Starting currents of transformers and transmission lines, short circuit currents of alternators, high frequency condenser discharges, current and voltage in loaded and unloaded telephone lines. Prerequisite: course 111. Mr. Bennett, Mr. Gray.

122. Electric Testing. II; 1 or 2 cr. Calibration of instruments by engineering methods in connection with University Standards Laboratory. Prerequisites: courses 103b, 111, or 131b. Mr. Bennett, Mr. Kartak.

123. Illumination and Wiring. II; 2 cr. Commercial illuminants; design of lighting installations; methods of wiring. Open

to students having one semester of electrical work. Additional credit for supplementary laboratory work. Mr. Kartak.

125. Conference. I or II; 2 cr. Preparation and presentation of technical papers. Open to engineering seniors and graduates. Mr. Bennett, Mr. Disque.

127. Electric Central Stations. I; 3 cr. Design, operation, and management of central stations; applications of electricity to industries. Class work and design. Open to engineering seniors and graduates. Mr. Shuster.

129. Electric Railways. II; 2 cr. Traffic conditions, location schedules, equipment. Open to seniors. Mr. Shuster.

130. Direct Current Laboratory. I; 2 cr. (for mechanical and chemical engineers); also I (last half); 1 cr. and II (first half); 1 cr. for civil and mining engineers. Should be accompanied by course 103a or 131a. Mr. Price and laboratory instructors.

131a. Direct Current Machinery. I or II; 2 cr. Similar in scope to course 101a. For civil, chemical, and mining engineers. Prerequisite: Physics 52. Mr. Shuster.

131b. Alternating Current Machinery. I or II; 2 cr. Principles in generation, transformation, and applications of alternating currents. Prerequisite: course 131a or 103a. Mr. Shuster.

132. Alternating Current Laboratory. II; 2 cr. Primarily for mechanical engineers. Prerequisite: course 130. Mr. Price and laboratory instructors.

133. Illumination and Photometry. I; 2 cr. Commercial illuminants and their application to lighting. Design of illuminating systems. Lectures and laboratory work. Mr. Kartak.

135. Telephony. I; 2 cr. Operation of telephone equipment. Mr. Bennett, Mr. Gray.

137. Power Distribution and Insulation. II; 3 cr. Design of distributing systems for buildings and municipalities; problems in high voltage insulation. Mr. Bennett, Mr. Gray.

140a. Elements of Electrical Engineering. I; 3 cr. Introductory course for sophomore electrical engineers. Open to students of other courses. Mr. Beebe.

140b. Elements of Electrical Engineering. II; 4 cr. (2 cr. class work and 2 cr. laboratory work). A continuation of 140a. Mr. Beebe.

141. Direct Current Machinery, Construction and Operation. I; 3 cr.

142. Alternating Current Theory. Fundamental laws. I; 2 cr.

143a. Alternating Current Machinery. Generator, synchronous motor. II; 2 cr.

143b. Alternating Current Machinery. Transformer, induction motor, commutator motor. I; 3 cr.

144. Direct Current Machinery. II; 3 cr. Similar in scope to 101a. Primarily for mechanical engineers. Prerequisite: Physics 52. Mr. Disque.

For Graduates

214. Advanced Dynamo Laboratory. I or II; 2 cr. Prerequisites: courses 112a, 112b, 113a. Mr. Price.

231. Transmission and Distribution. Yr. Mr. Bennett.

232. Alternating Current Theory. Yr.; 3 cr. Transient phenomena, traveling and stationary waves, electromagnetic radiation and related subjects. Analytical and experimental work. Mr. Bennett.

ENGINEERING CONTRACTS AND SPECIFICATIONS

PROFESSOR MEAD, INSTRUCTOR CONRAD.

1. Contracts and Specifications. II; 2 cr. Engineering relations, legal, contractual, and personal; preparation of contracts, specifications, and other engineering papers.

FORESTRY AND WOOD TECHNOLOGY

H. D. TIEMANN (chairman); LECTURERS GERRY, KOEHLER, NEWLIN, TEESDALE.

101. Forestry and Utilization of Wood. I; 2 cr. Relation of forestry and utilization to conservation. Open to all Engineering students. Mr. Tiemann.

102. Wood Technology. II; 2 cr. Structure and identification of wood; physical and mechanical properties; kiln drying, preservation, utilization. For juniors, seniors and graduates. Mr. Tiemann, Mr. Koehler, Mr. Newlin, Mr. Teesdale.

110. Structural Timbers. II; 1 cr. Identification, preservation, mechanical properties, grading rules, and building codes. Prerequisites: Mechanics 3 and 4. Mr. Newlin, Mr. Koehler, Mr. Teesdale.

HYDRAULIC AND SANITARY ENGINEERING

PROFESSOR MEAD; ASSOCIATE PROFESSOR CORP; INSTRUCTORS CONRAD, WARD.

For Undergraduates

1. Elementary Hydraulics. I or II; 3 cr. Mechanics of fluids; theory, calibration and use of instruments. Prerequisites: Mechanics 1, 2. Mr. Corp, Mr. Ward.

2. Elementary Hydraulics. I or II; 4 cr. Similar to course 1 with additional recitation and laboratory work. Prerequisites: Mechanics 1, 2. Mr. Corp, Mr. Ward.

For Undergraduates and Graduates

102. Testing of Hydraulic Machines. I; 2 cr. Impulse and turbine wheels, pumps, and rams. Prerequisite: course 1. Mr. Corp.

103. Experimental Hydraulics. I or II; 1 to 5 cr. Tests on hydraulic machinery; experiments on flow of water. A special field may be selected by the student with the approval of the instructor. Prerequisite: course 1. Mr. Mead, Mr. Corp.

104. Water Power Engineering. I; 3 cr. Investigation and development of water powers. Prerequisite: course 1. Mr. Mead, Mr. Conrad.

105. Hydraulic Machinery. II; 2 cr. Theory; selection and installation. Prerequisite: course 1. Mr. Mead, Mr. Conrad.

106. Sewage and Garbage Disposal. I; 1 cr. Development, disposal works, and methods of treatment. Mr. Corp.

110. Hydrology. II; 2 cr. Physical, geological, and meteorological relations of water to power, supply, irrigation, and sanitation. Mr. Mead, Mr. Conrad.

111. Water Supply. I; 3 cr. Domestic supply, commercial and fire service. Prerequisite: course 1. Mr. Mead, Mr. Conrad.

112. Sewerage, Drainage, and Irrigation. II; 3 cr. Prerequisite: course 1. Mr. Mead, Mr. Corp, Mr. Conrad.

113a. Hydraulic Design. I; 2 cr. Investigation of supply for power, irrigation, or municipal purposes. Prerequisite: courses 1, 110. Mr. Mead, Mr. Conrad.

113b. Hydraulic Design. II. Continuation of 113a. Individual design of some part of an hydraulic work. Prerequisites: courses 1, 110, 113a. Mr. Mead, Mr. Conrad.

114. Rivers and Canals. II; 1 cr. Improvement of internal waterways and harbors. Prerequisite: course 1. Mr. Mead, Mr. Conrad.

MACHINE DESIGN

PROFESSOR MACK*; ASSISTANT PROFESSOR KEOWN; INSTRUCTORS
HYLAND, MACLEAN, MORRISON.

For Undergraduates

1. Mechanism. I or II; 4 cr. Linkages, cams, toothed gears, belting, chains, and ratchets. Prerequisites: Mechanical Drawing 1, 2. Mr. Keown, Mr. MacLean, Mr. Morrison.

2. Valve Gears. I or II; 1 cr. Simple slide valve, automatic valves, reversing valves; application of Bilgram, Reuleaux and Zeuner diagrams. Prerequisite: course 1. Mr. Keown, Mr. MacLean, Mr. Morrison.

3. Machine Elements. I or II; 4 cr. Application of mechanics and empirical methods to design of machine elements; commercial drafting practice. Primarily for mechanical engineers. Prerequisites: course 1, Mechanics 1, 2. Mr. Hyland.

4. Advanced Machine Design. I or II; 4 cr. Design of complete machines. Prerequisite: course 3. Mr. Hyland.

5. Machine Elements. I or II; 3 cr. Similar in scope to course 3. For electrical and chemical engineers. Prerequisites: course 1, Mechanics 1, 2, 3. Mr. MacLean, Mr. Morrison.

6. Advanced Machine Design. I or II; 2 cr. Similar in scope to course 4. For electrical engineers. Prerequisite: course 5. Mr. MacLean.

7. Chemical Machine Design. II; 2 cr. Pumping and filtration machinery; sugar, oil, and other chemical machinery. For chemical engineers. Prerequisite: course 5. Mr. MacLean.

*On leave of absence 1916-17.

8. Patent Office Drawing. I or II; 1 cr. Requirements of U. S. Patent Office. Prerequisites: Mechanical Drawing 1, 2. Mr. Keown.

11. Machine Testing. I or II; 1 cr. Experimental determination of strength and efficiency of machine elements. Mr. Hyland, Mr. MacLean, Mr. Morrison.

12. Advanced Machine Testing. II; 1 cr. Continuation of 11. Mr. Hyland, Mr. MacLean.

For Undergraduates and Graduates

109. Design of Special Machines. II; 2 cr. Jigs, fixtures, and automatic machines. Prerequisite: course 4 or 6. Mr. Keown.

110. Logging and Wood Working Machinery. II; 2 cr. Prerequisite: course 3 or 5. Mr. Keown.

MECHANICS

PROFESSOR MAURER; ASSOCIATE PROFESSOR WITHEY; ASSISTANT PROFESSOR KOMMERS; INSTRUCTORS ELMENDORF, ROARK, SCUDDER.

For Undergraduates

1. Statics. I or II, first ten weeks; 3 cr. Prerequisites: Physics 51, and enrollment in or completion of Mathematics 55.

2. Dynamics. I or II, last eight weeks; 2 cr. Prerequisite: course 1.

3. Mechanics of Materials. I or II; 5 cr. Prerequisite: course 1.

51. Materials of Construction. I; 2 cr. Laboratory work; assigned readings and reports; preparation of materials. Prerequisite: enrollment in or completion of course 3. For civil engineers.

52. Materials of Construction. I or II; 2 cr. Continuation of 51.

53. Materials of Construction. I or II; 2 cr. For all except civil engineers. Prerequisite: enrollment in or completion of course 3.

For Undergraduates and Graduates

106. Advanced Mechanics of Materials. I; 2 cr. Inertia circle and ellipse; kern; beams of unsymmetrical section; curved beams; flat plates and thick cylinders. Prerequisites: courses 2, 3. Mr. Maurer.

107. Advanced Technical Mechanics. II; 2 cr. Periodic motion, whirling shafts and rotating discs; vibration; balancing; dynamical stability. Prerequisites: courses 1, 2. Mr. Maurer.

108. Advanced Materials Laboratory. I; 2 or more cr. Prerequisite: course 51 or 53. Mr. Withey.

109. Graphics. II; 2 cr. Application to engineering problems; representation of experimental data. Prerequisites: courses 1, 2, 3. Mr. Kommers.

MINING AND METALLURGY

PROFESSORS HOLDEN*, McCAFFERY; INSTRUCTOR KENNEDY.

101. Excavation. I; 3 cr. Earth, rock, submarine; methods and costs. Mr. Holden.

102. Tunneling, Boring, and Shaft Sinking. II; 3 cr. Mr. Holden.

103. Prospecting, Developing and Exploitation. I; 3 cr. Mr. Holden.

105. Mine Engineering. Yr.; 2 cr. Drainage, ventilation, and lighting of mines; haulage and hoisting; surface plant; prevention of accidents; sampling; valuation and reporting. Mr. Holden, Mr. Kennedy.

107. Ore Dressing. II; 3 or 4 cr. Principles and design of concentrating plants, coal breakers, and washers. Prerequisite: Geology 6. Mr. Holden, Mr. Kennedy.

109. Mine and Smelter Accounts. I; 1 cr. Mr. McCaffery.

110. Summer Mining Trip. Study of important western mining districts, including at least one month of paid underground work. Taken in 1917 and alternate years.

121. Assaying. I or II; 2 or 3 cr. Ores, matte, bullion, slag, metallurgical by-products. Lectures and laboratory work. Prerequisite: Chemistry 2. Mr. Kennedy.

* On leave of absence 1916-17.

122. General Metallurgy. I; 3 cr. Theory and practice. Lectures. Prerequisite: Chemistry 1. Mr. McCaffery.

123. Metallurgy of Copper and Lead. II; 3 cr. Prerequisite: course 122 or equivalent course in chemistry. Mr. McCaffery.

124. Metallurgy of Iron and Steel. I or II; 2 or 3 cr. Prerequisite: course 122 or equivalent course in chemistry. Mr. McCaffery.

125. Metallurgy of Minor Metals. I; 2 cr. Prerequisite: course 122 or equivalent course in chemistry. Mr. McCaffery.

126. Clay Testing and Manufacture. I; 2 cr. Lectures and laboratory work. Mr. McCaffery, Mr. Kennedy.

For other courses in ceramics see Manual Arts, p. 173.

For Graduates

208. Gold and Silver Milling and Cyanidation. II; 2 cr. Mr. Holden.

225. Metallurgical Laboratory. I or II; 2 or more cr. Mr. McCaffery.

RAILWAY ENGINEERING

ASSOCIATE PROFESSOR VAN HAGAN, INSTRUCTOR BOON.

1. Railway Curves. I or II; 2 cr. Computation and field location of simple, compound, and spiral curves and railway turnouts. Prerequisites: trigonometry, elementary surveying. Mr. Van Hagan.

2. Theory of Railway Location and Construction. I; 2 cr. Prerequisite: course 1. Mr. Van Hagan.

22. Practice in Railway Location and Construction. I; 3 cr. To be taken only in connection with 2. Mr. Van Hagan, Mr. Boon.

For Undergraduates and Graduates

103. Maintenance of Way and Structures. II; 2 cr. Prerequisites: courses 2, 22. Mr. Van Hagan.

104. Railway Engineering. I; 2 cr. For electrical and mining engineers. Prerequisite: trigonometry, elementary surveying. Mr. Van Hagan.

105. Economics of Railway Engineering. I; 2 cr. Prerequisites: courses 2, 22. Mr. Van Hagan.

107. Advanced Railway Design. I or II; 2 cr. Special problems in construction and maintenance. Open to seniors and graduates. Mr. Van Hagan.

108. Railway Signaling. II; 1 cr. Theory and design. Mr. Van Hagan.

110. Masonry Construction. II; 2 cr. Theory and design. Prerequisites: Mechanics 3, 51. Mr. Boon.

111. Substructures. II; 1 cr. Ordinary and deep foundations. Prerequisite: course 110. Mr. Van Hagan.

112. Estimates and Valuations. II; 2 or more cr. Theory and methods of valuing railways and public utilities. Mr. Boon.

ROADS AND PAVEMENTS

ASSOCIATE PROFESSOR SMITH, ASSISTANT PROFESSOR HECKER.

For Undergraduates and Graduates

As a preparation for the special courses in Roads and Pavements civil engineers are advised to take a course in general and economic geology with as much field work as possible.

101. Country Roads. II; 1 cr. Designed especially for students in Agriculture. Mr. Smith.

102. Introduction to Construction and Maintenance. I or II; 3 cr. Library work and reports. Mr. Smith.

103. Advanced Economics. I or II; 3 cr. Designs, estimates, inspection trips. Prerequisite: course 102. Mr. Smith.

104. Testing Road Materials. II; 3 cr. Work in chemical and pavement laboratories. This course includes the instruction given in the course on Analysis of Bitumens for Highways. (Chemical Engineering 121) Mr. Smith, Mr. Hecker. For course in highway bridges see Structural Engineering 112.

SHOP WORK

ASSISTANT PROFESSOR GODDARD; INSTRUCTORS BRUNSELL, CHISHOLM, DABNEY, SCHUMANN, SCHMIDT; ASSISTANT PETERS.

1. **Elementary Pattern Making.** I or II; 1 cr. Mr. Chisholm.
2. **Bench Work in Iron and Steel.** I or II; $\frac{1}{2}$ cr. Mr. Dabney, Mr. Schmidt.
3. **Elementary Forge Work.** I or II; $\frac{1}{2}$ cr. Mr. Schumann, Mr. Peters.
4. **Lathe Work in Metals.** I or II; 1 cr. Turning, boring, thread cutting. Mr. Dabney, Mr. Schmidt.
5. **Planing and Milling.** I or II; 1 cr. Surfacing, slotting, and gear cutting. Mr. Dabney, Mr. Schmidt.
6. **Tool Making.** I or II; 2 cr. Taps, reamers, counterbores, milling cutters. Prerequisites: courses 4, 5. Mr. Dabney, Mr. Schmidt.
7. **General Shop Work.** I or II; 2 cr. Manufacturing complete machines. Prerequisites: courses 4, 5. Mr. Dabney, Mr. Schmidt.
8. **Heat Treatment of Steel.** II; 1 cr. Annealing, hardening, tempering, and case hardening of various kinds of steel. Prerequisite: course 3. Regularly for seniors only. Mr. Goddard, Mr. Schumann.
9. **Advanced Pattern Making and Foundry Practice.** II; 1 cr. Prerequisite: course 1. Regularly for seniors only. Mr. Chisholm, Mr. Payton.
10. **Industrial Practice.** 4 cr. Not less than seven weeks of work, done outside the University, preferably under a well-developed system of methods and discipline. In exceptional cases credit may be secured by four weeks of vacation work in the University Shops.
12. **Manufacturing Methods.** I; 1 cr. Shop management; seminary and laboratory; administration of course 7. Regularly for seniors only. Mr. Goddard.
13. **Elementary Foundry Practice.** I or II; 1 cr. Iron, brass, white metal alloys. Mr. Payton.

STEAM AND GAS ENGINEERING

PROFESSOR CALLAN; ASSOCIATE PROFESSOR LARSON; ASSISTANT PROFESSOR BLACK; INSTRUCTORS AAGAARD, BERGGREN, ROMIG.

For Undergraduates

1. Elementary Thermodynamics. I; 4 cr. Application of principles to prime movers. Prerequisites: Physics 51, 52, Mathematics 54, 55. Mr. Larson.

2. Elementary Thermodynamics. II; 4 cr. Economics of prime movers, boilers, power plant auxiliaries, refrigerating machines. Mr. Larson.

3a. Elementary Thermodynamics. I; 3 cr. For electrical, chemical, and mining engineers. Prerequisites: Physics 51, 52; Mathematics 54, 55. Mr. Aagaard, Mr. Berggren, Mr. Romig.

3b. Elementary Thermodynamics. II; 3 cr. Continuation of 3a. Mr. Aagaard, Mr. Berggren, Mr. Romig.

7. Survey of Steam Engineering. II; 2 cr. Principles of thermodynamics; steam engines, gas engines, boilers. For civil engineers. Prerequisites: Physics 51, 52; Mathematics 54, 55. Mr. Black.

Laboratory Courses

22. Elementary Testing. II; 2 cr. Calibration of instruments; tests of engines, analysis of fuels for junior mechanical engineers. Mr. Black and laboratory instructors.

23. Advanced Testing. I; 2 cr. Continuation of 22. Complex engines, air compressors, refrigerating machinery, gas producers and engines, turbines, boilers, and complete plants. Mr. Black and laboratory instructors.

25. Elementary Testing. II; 2 cr. Calibration of instruments; adjustment and testing of simple engines. For chemical engineers. Mr. Black and laboratory instructors.

26. Advanced Testing. I; 1 cr. Continuation of 25. Adjustment and testing of engines and boilers. For chemical engineers. Mr. Black and laboratory instructors.

28. Elementary Testing. II; 2 cr. Calibration of instruments testing of simple steam engines and turbines, and gas engines. For electrical engineers. Mr. Black and laboratory instructors.

29. Advanced Testing. I; 2 cr. Continuation of 28. Steam engines, air compressors, refrigerating machinery, gas producers and engines, boilers, complete plants; gas and fuel analysis. Mr. Black and laboratory instructors.

30. Gas Engine Testing. I or II; 2 cr. No prerequisite. Open to all but freshmen in the College of Engineering and to juniors and seniors in other colleges.

For Undergraduates and Graduates

105. Steam and Gas Engine Calculations. I; 2 cr. Solution and discussion of problems of design in drafting room. Prerequisites: courses 1, 2 or 3a, 3b. Mr. Callan.

108. Heating, Ventilating, and Refrigerating. I; 3 cr. Principles and commercial design problems. Prerequisites: courses 1, 2 or 3a, 3b or 7. Mr. Black.

109. Internal Combustion Engines. II; 2 cr. Theory and design of engines and accessories. Mr. Callan.

111. Compressed Air. II; 2 cr. Theory and applications. Prerequisites: courses 1, 2 or 3a, 3b or 7. Mr. Larson.

112. Steam Turbines. I; 2 cr. Theory and design. Prerequisites: courses 1, 2 or 3a, 3b. Mr. Callan.

Laboratory Courses

124. Advanced Commercial Testing. II; 1 cr. Special tests on engines, transmission machinery, heating and ventilating apparatus and power plants. Mr. Black and laboratory instructors.

127. Short Course in Testing. I; 2 cr. Calibration of instruments, tests on engines, turbines and power plants. Mr. Black and laboratory instructors.

130. Research. Yr.; credit according to work done. Open to graduates and others by consultation. Mr. Black and laboratory instructors.

STRUCTURAL ENGINEERING

PROFESSOR TURNEAURE; ASSOCIATE PROFESSOR KINNE; INSTRUCTOR GLAETTLI.

For Undergraduates

2. Stresses in Simple Structures. II; 4 cr. Algebraic and graphical analysis. Prerequisites: Mechanics 1, 2. Mr. Kinne, Mr. Glaettli.

3. Design of Roof Trusses and Plate Girders. I; 4 cr. Detailed drawings, estimates of cost and weight. Prerequisite: course 2. Mr. Kinne, Mr. Glaettli.

4. Design of Railway Bridge Trusses. II; 3 cr. General drawings, estimates of weight and cost of riveted and pin connected bridge trusses. Prerequisites: courses 2, 3. Mr. Kinne, Mr. Glaettli.

10. Structural Design. II; 2 cr. General course in roofs and buildings. For mechanical, electrical, and mining engineers. Prerequisites: Mechanics 1, 2. Mr. Kinne.

For Undergraduates and Graduates

105. Principles of Reinforced Concrete. I; 2 cr. Analysis and design. Prerequisites: Mechanics 1, 2. Mr. Turneure, Mr. Glaettli.

106. Concrete Arches. I; 2 cr. Analysis and design. Prerequisites: Mechanics 1, 2. Mr. Glaettli.

107. Statically Indeterminate Structures. I; 2 cr. Analysis of swing, cantilever, arch, and suspension bridges. Open to seniors and graduates in Civil Engineering. Prerequisite: course 2. Mr. Kinne.

108. Statically Indeterminate Structures and Secondary Stresses. II; 2 cr. Prerequisites: courses 2, 107. Mr. Turneure.

109. Design of Swing Bridges. II; 2 cr. Prerequisites: courses 2, 3, 4, 107. Mr. Kinne.

111. Principles of Reinforced Concrete. II; 2 cr. Continuation of 105. Mr. Turneure, Mr. Glaettli.

112. Highway Bridges and Culverts. II; 2 cr. Design and analysis. Prerequisites: courses 2, 3, 4, 105. Mr. Kinne.

TOPOGRAPHIC AND GEODETIC ENGINEERING

ASSOCIATE PROFESSOR SMITH; INSTRUCTORS OWEN, CARGILL, SCHUSTEDT, SHUFFLEBARGER, WEAVER.

For Undergraduates

1. **Elementary Surveying.** I; 2 cr. Use of chain, tape, and level; platting of field notes. Mr. Owen, Mr. Schustedt.
2. **Elementary Surveying.** II; 2 cr. Continuation of 1, use of level, compass, and transit. Mr. Owen, Mr. Schustedt.
3. **Land Surveying.** I; 3 cr. Use of transit, solar attachment, sextant, and plane table; methods of computation; practice in lettering and mapping. Mr. Owen, Mr. Schustedt.

For Undergraduates and Graduates

104. **Advanced Land Surveying.** II; 4 cr. Continuation of 3. Use of instruments of precision in topographic, municipal, hydrographic, and mining work; making plats and maps from field notes. Mr. Owen, Mr. Schustedt.

105. **Elementary Geodesy.** II; 2 or 3 cr. Use of theodolite and precise level; base line triangulation and astronomy. Mr. Smith.

106. **Summer School of Surveying.** Field work illustrating courses 104 and 105. Accurate triangulation, topographic and hydrographic survey of region near Devil's Lake, Wisconsin. Four weeks from Thursday of examination week, second semester. Prerequisites: courses 3, 104. Mr. Smith, Mr. Shufflebarger, Mr. Weaver, Mr. Cargill.

107. **Advanced Geodesy.** I; 2 cr. Continuation of 105. Mr. Smith.

108. **Short Course in Surveying.** I or II; 3 cr. Adjustment and use of transit and level. For mechanical and electrical engineers. Mr. Owen, Mr. Schustedt.

109. **Rapid Topography.** II; 2 cr. Use of plane table and aneroid barometer. Adapted for training topographers for the Geological Survey. Mr. Owen.

110. **Mining Surveying.** I or II; 2 cr. Underground survey of university tunnels; mining problems. Mr. Owen.

COLLEGE OF AGRICULTURE

H. L. RUSSELL, DEAN

General Information

The College of Agriculture is one of the general divisions of the University. Instruction in the general sciences, languages, and mathematics is given to agricultural students in other colleges of the University; but for the purely agricultural subjects, separate buildings, equipment, and staff of instructors are maintained. Agricultural students enter the University with the same standing as students in other colleges and have the advantages incident to a large university, such as the general laboratories, libraries, and student organizations. Aside from the purely instructional work of the College the facilities for research in agriculture afford special opportunities for both regular and advanced students to secure a knowledge of the best methods of agricultural science.

Buildings

The buildings occupied by the College of Agriculture are located at the west end of Observatory Hill. They have been erected and equipped with particular attention to the special needs of the work in the various departments.

The administration offices of the College and Experiment Station, Farmers' Institutes, lecture rooms, laboratories, and offices for several of the departments, are located in Agricultural Hall. At the rear of the main building is a large wing which furnishes quarters for the library and reading room in the basement. The second and third floors are occupied by an auditorium, which has a seating capacity of 750, and is used for general assemblies and class work.

West of the main building is a group comprised of Hiram Smith Hall, the Dairy Laboratory, and the Dairy Machinery Laboratory.

The Soils Building, with greenhouses adjoining, provides lecture rooms and laboratories for the instructional and research work of the department, as well as offices for the State Soil Survey.

The Horticulture and Plant Pathology departments are located in the Horticulture Building, which, with the adjoining greenhouses, is provided with every modern equipment for instruction and research in these subjects.

The Agronomy Building contains the offices of the department, a large grain judging room, laboratories for seed testing and inspection, grain curing, cleaning, and storage of seed grains.

The Agricultural Engineering Building provides offices, lecture and drafting rooms, power and farm machinery laboratories, also a laboratory for smaller farm tools and implements and a concrete construction laboratory.

The Agricultural Chemistry Building furnishes excellent facilities for teaching and research. It contains a large laboratory, an assembly room with seating capacity of 400, in addition to special laboratories for advanced students and the chemistry laboratories of the Experiment Station, including those of the Feed and Fertilizer inspection service.

The Live Stock Pavilion provides a large arena, which is used for stock judging work and exhibition purposes. The pavilion has seating arrangements for 2500 people. Beneath the amphitheatre seats there are stalls for the housing of the horses belonging to the University Farm. In addition to this there are offices, operating room, and dispensary.

The Poultry Building provides offices and classrooms. Pens of all of the important breeds are provided and practical instruction is given in all lines of poultry raising. A separate research poultry plant is maintained on an outlying portion of the University Farm. The Economic Entomology Department has a building by itself. Beekeeping, including special work in queen rearing, has been added recently to this department.

The University Farm buildings include barns for the horses, cattle, sheep, and swine as well as two large stock judging rooms. Other buildings are provided for storing farm machinery, silage, manure, and tobacco.

A group of buildings devoted exclusively to the manufacture of hog cholera serum has been erected within the last few years, on one portion of the University Farm. The State Legislature of 1915 provided for the erection of a serum laboratory which has been

constructed of concrete and steel and provides excellent facilities for the handling of hog cholera serum.

Farm Lands

The College of Agriculture is provided with three farms, the University Farm, the Hill Farm, and the Eagle Heights Farm, including about 746 acres of tillable land. These farms are operated to facilitate both instruction and research in agriculture.

Live Stock

The university herds and flocks represent the principal breeds of dairy and beef cattle, draft horses, swine, sheep, and poultry, including many individuals that are well-known prize winners.

Library

The Agricultural College Library includes about 15,800 bound volumes and 14,500 pamphlets distinctly agricultural in character. This library is a part of the general University Library, but is kept in special quarters in Agricultural Hall so as to be readily available to students in this College. It is especially strong in the files of scientific agricultural journals, both American and foreign, and the record books of pure bred animals. A trained librarian is in attendance to assist students.

Organizations

Several societies, maintained by the agricultural students, meet weekly to discuss questions related to their special interests. These organizations are for drill in parliamentary practice, training in declamation, debate, and essay writing, as well as for the discussion of scientific and practical questions. The Agricultural Literary Society holds weekly meetings to discuss general questions in agriculture. The following list shows the nature of the various clubs and societies:

The Grafters' Club—Students interested in horticulture; Agricultural Engineers' Club—Students interested in studying agricultural machinery; Live Stock Club—Students interested in various breeds of live stock; Country Life Club—Students interested in the social phases of rural life.

A chapter of the national honorary agricultural fraternity, Alpha Zeta, is maintained by faculty and student members.

An Agricultural Experiment Association with a paid membership of 1500 is maintained by students of the College of Agriculture, both past and present, for the purpose of cooperating with the College and Experiment Station in advancing the agriculture of the commonwealth. By means of this organization, the members of which are located in all sections of the state, the College is in close touch with the great body of Wisconsin farmers.

Special Facilities for Study

In the various departments of the College of Agriculture special lines of research are continually in progress, affording properly qualified students excellent opportunities to secure training of special character.

By statute, the licensing of feeding stuffs is placed under the Department of Chemistry, the inspection of seeds under the Agronomy Department, the enrollment of stallions under the Department of Horse Breeding, and the manufacture of hog cholera serum under the Veterinary Science Department.

Farm Experience

Before graduating from the four year course a student must have had at least six months of actual farm experience satisfactory to the executive office of the College of Agriculture.

Before a Middle Course student can begin the second year of his work he must have had at least one year of practical farm experience satisfactory to the executive office of the College of Agriculture.

The College of Agriculture maintains an employment bureau to aid students in securing positions on farms where they may gain the required farm experience.

Accredited Farm System

The College of Agriculture has established a system of accredited farms on which advanced students may have an opportunity, to secure practical training and experience with successful progressive farmers. Certain departments of the college offer courses of study which may be carried on *in absentia* on such farms. For undergraduate courses of this character the student is referred to the announcements of the several departments of the College.

Graduate students wishing to take advantage of this opportunity may do so under the general conditions applying to work done *in absentia* in candidacy for the master's degree. Further information may be secured from Prof. D. H. Otis, chairman of the Committee on Accredited Farms.

Plan of the College Activities

The work of the College of Agriculture is conducted on a three-fold basis. Each department is directly concerned:

First, to develop agricultural science through investigation and experiment.

Second, to give instruction to students at the University.

Third, to disseminate agricultural information among the farmers of the state by means of publications, farmers' courses, institutes, and the agricultural extension service.

Fees and Expenses

For tuition and fees, see page 66 and following.

The expenses of resident students in the graduate and long courses are practically the same as for those pursuing other university courses.

The expenses of resident Short Course and Dairy students will vary from \$125 to \$150 for the term for room, board, washing, and necessary books.

Courses of Instruction

The following courses have been arranged to meet the needs of students of various classes.

Graduate Courses offer to advanced students opportunities for professional training and original investigation, made possible through an active Experiment Station, associated with numerous scientific laboratories. The special lines of study will be left largely to the selection of the student, subject to the approval of the agricultural faculty. Students may participate in experiments in progress, and after suitable experience, conduct independent investigations. When contributions to knowledge of permanent value are made they may be published through the bulletins of the Experiment Station with proper credit to the contributor.

Long Course offers scientific training in agricultural bacteriology, agricultural chemistry, agricultural economics, agricultural

education, agricultural engineering, agricultural journalism, agronomy, animal husbandry, dairying, economic entomology, experimental breeding, forestry, horticulture, plant pathology, poultry husbandry, soils, and veterinary science.

This course also embraces general training in chemistry, physics, biology, bacteriology, and other branches which have an application in agriculture. The field is so broad, however, that it is impossible for the student to pursue in four years all the courses offered in addition to acquiring the necessary fundamental studies, and hence much liberty of selection is allowed.

Middle Course consists of two full college years. The first year embraces essentially the work of the first year of the Long Course, with the exception of foreign language. In the second year the time is devoted very largely to elective work. Before a student may enter the second year of this course, he must have had at least one full year of practical farm experience. Considerable work in the basal sciences is required to lay a foundation for the distinctively agricultural work. Practical subjects may be elected during the second year.

Course for the Training of Teachers. Graduates of the Long and Middle Courses in Agriculture, fulfilling the several special requirements of the Course for the Training of Teachers, will be entitled to receive a license to teach agriculture. (See pp. 255 and 325 of this catalogue; also the Long and Middle Course Circular.)

Summer Session Courses include work in agricultural bacteriology, agricultural chemistry, agricultural economics, agricultural education, agricultural engineering, agronomy, animal husbandry, dairying, economic entomology and plant pathology, farm management, home economics, horticulture, poultry husbandry, and soils. For details see Index under Summer Session.

Short Course for two terms of fourteen weeks each is provided for those who can devote only a limited time to study, and who, therefore, desire the greatest amount of directly useful knowledge that can be acquired in the brief time allowed. This course begins early in December and closes in March. An illustrated circular describing this course may be had on request to Prof. D. H. Otis, College of Agriculture, Madison, Wis.

Winter Dairy Course. This course is open to persons who have had at least six months' experience in a creamery or cheese factory and covers one term of twelve weeks, beginning about November 1. The course is designed to train creamery butter makers and factory cheese makers in the science and practice of

their respective lines. Certificates are given to those who satisfactorily complete the full course and have worked in a creamery or cheese factory for two seasons of not less than seven months each, one before and the other after the period spent in the Dairy Course. An illustrated circular describing this course in detail will be sent upon application to Prof. E. H. Farrington, College of Agriculture, Madison, Wis.

Summer Dairy Course. This course is intended for beginners or those having little practical knowledge of creamery or dairy work. Students are admitted at any time during the spring and summer after March 1. They are expected to remain at least ten weeks, although they may continue the work longer, if desirable. Laboratory exercises and theoretical instruction are given as required.

Extension Courses Given at the University

Farmers' Week. This is a popular course of addresses, demonstrations, and exercises, covering a period of one week, designed to give busy farmers the most useful instruction and practice in the science of agriculture in the shortest possible time at a season when they can be away from home for a brief period. This course, beginning February 5, is given by the staff of the College of Agriculture assisted by other speakers. Programs may be had upon application to Prof. K. L. Hatch, College of Agriculture, Madison, Wis.

Woman's Week in Home Economics. This course for one week is designed to give women practical and helpful instruction in the various phases of home economics. The plan of instruction includes lectures, demonstrations, and laboratory work on such subjects as cooking, serving, and nursing. The course is held at the same time as the Farmers' Course to afford an opportunity for farmers' wives and daughters to attend. Detailed information will be furnished upon request to Prof. Abby L. Marlatt, Madison, Wis.

Special Dairy Course. This is a week's course of lectures, conferences, and demonstrations, designed to meet the needs of creamery and cheese factory operators and managers, and to give them advanced instruction in connection with problems of management of their establishments as well as to inform them on recent advances in the science of dairying. The course is held at the time of the Farmers' Course. A special course for Cow Testing Association men is held at the same time. Detailed programs may be secured

upon application to Prof. E. H. Farrington, College of Agriculture, Madison, Wis.

Young People's Week. A week's course of lectures, demonstrations, and exercises in grain growing and judging, selection and testing of seeds, and other subjects relating to farm life which are of interest to farm boys and girls. Those who have won scholarships in grain growing contests conducted by local fair authorities and the Agronomy Department pursue this course. Each day, special classes for the girls in attendance will be held at the Department of Home Economics. For further information address Prof. R. A. Moore, College of Agriculture, Madison, Wis.

Terms of Admission

Graduate Courses in Agriculture. Graduates of this University and other colleges and universities in good standing are admitted to this course without examination.

Long Course in Agriculture. The requirements for admission to this course are given under Admission to the University (see Index).

Adult Special Students in Agriculture. For terms of admission for adult special students, see Index under Admission.

Middle Course in Agriculture. Requirements for admission are the same as for the Long Course.

Short Course in Agriculture. Students in this course must be at least sixteen years of age and have a good common school education. No entrance examinations are required.

Dairy Courses. The requirements for admission to the Winter Dairy Course are the same as for the Short Course with the exception that the candidates must have had not less than six months' experience in a creamery or cheese factory before entering the course. For admission to the summer and special courses no previous experience is required.

Farmers' and Women's Weeks. No examinations are required for admission to these courses, but the candidate must be at least twenty-five years of age to be admitted to the Farmers' Course.

Fellowships and Scholarships

Two fellowships of \$400 per year each and four scholarships of \$225 per year each are offered graduate students in Agriculture and one fellowship in Home Economics. Applications for these honors

must be made to the Registrar of the University on proper forms by March 1.

A. J. Horlick Scholarship

In 1915 Regent A. J. Horlick gave a scholarship of \$225. This is awarded in the College of Agriculture and provides for special research on some phase of inheritance of disease resistance in plants.

Loan Fund

There is a loan fund of \$1,500 which is available to students in the College of Agriculture. This is to be lent to needy students in small amounts without interest. If note is not paid at time of maturity, interest at the rate of 6 per cent will be charged until it is paid.

Degrees

The degree of Bachelor of Science (Agriculture) is conferred upon students who successfully complete the Long Course in Agriculture.

The degree of Bachelor of Science (Home Economics) is conferred upon those completing the Long Course in Home Economics.

The title of Graduate in Agriculture will be conferred upon students who complete the Middle Course in a satisfactory manner.

The degree of Master of Science is conferred upon agricultural graduates who complete at least one year of advanced study at the University and present an acceptable thesis on a topic approved by the agricultural faculty.

Certificates

Students who complete in a satisfactory manner the Short Course or Dairy Course will be granted appropriate certificates.

Outlines for the Long Course in Agriculture

A. A student entering with three years of any one classical or modern language, or with four years of any two foreign languages, is absolved from further language requirements in the College of Agriculture. (See Outline.)

B. Students who do not meet the requirements of A must take either French or German as follows:

Entrance Language	University Requirement
1. Two units.....	8 cr. French or German
2. None.....	16 cr. French or German

The 8 credits of beginning language will be counted as electives outside the College of Agriculture when 14 credits are presented for entrance.

In calculating the hours per week for the various studies, two hours of laboratory, field, or barn practice count as one hour of classroom work, which is the equivalent of one credit in this outline. Required subjects outside the College of Agriculture (marked L. & S.) will be found catalogued under the College of Letters and Science.

A. OUTLINE FOR STUDENTS NOT REQUIRED TO TAKE FOREIGN LANGUAGE

Freshman Year

FIRST SEMESTER

Subject	Credits
English 1a (L. & S.).....	3
Mathematics 71 (Engineering).....	5
Chemistry 1 (L. & S.).....	5
Agronomy 1 or Agricultural Engineering 1, first half of first semester.....	2½
Animal Husbandry 1, last half of first semester.....	2½
Total	18
Military Drill.....	1
Physical Education.....	1

SECOND SEMESTER

English 1b (L. & S.).....	3
Agricultural Bacteriology 1.....	5
Chemistry 1 (L. & S.).....	5
Agricultural Engineering 1 or Agronomy 1, last half of second semester.....	2½
Dairy Husbandry 1, first half of second semester.....	2½
Total	18
Military drill.....	1
Physical Education.....	1

OUTLINES FOR THE LONG COURSE IN AGRICULTURE 319

Sophomore Year

FIRST SEMESTER

Chemistry 11Ag. (L. & S.).....	2½
Chemistry 120 (L. & S.).....	2½
Physics 61 (L. & S.).....	3
Botany 1 (L. & S.).....	5
Horticulture 1.....	3
Electives.....	2

Total.....	18
Military Drill.....	1
Physical Education.....	1

SECOND SEMESTER

	Credits
Agricultural Chemistry 1 and 2.....	5
Physics 61 (L. & S.).....	3
Soils 1.....	5
Zoology 3 (L. & S.).....	3
Electives.....	2

Total.....	18
Military Drill.....	1
Physical Education.....	1

Junior Year

FIRST SEMESTER

Botany 129 (L. & S.).....	2
Animal Husbandry 2.....	2
Agricultural Economics 1.....	5
Electives.....	8

Total.....	17
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SECOND SEMESTER

Botany 146 (L. & S.) or Physiology 3 (Animal Physiology)	4
Electives.....	13

Total.....	17
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Senior Year

FIRST SEMESTER

Major, including Thesis.....	5
Minor, assigned.....	5
Electives.....	5
Total.....	15

SECOND SEMESTER

Major, including Thesis.....	5
Minor, assigned.....	5
Electives.....	4
Total.....	14

B. OUTLINE FOR STUDENTS REQUIRED TO TAKE FOREIGN LANGUAGE

Freshman Year

FIRST SEMESTER

Subject	Credits
English 1a (L. & S.).....	3
*German 2a or French 10, and 13, 14 or 15.....	4
Chemistry 1 (L. & S.).....	5
Agronomy 1 or Agricultural Engineering 1, first half of first semester.....	2½
Animal Husbandry 1, last half of first semester.....	2½
Total.....	17
Military Drill.....	1
Physical Education.....	1

SECOND SEMESTER

English 1b (L. & S.).....	3
German 2b or French 10 and 13, 14 or 15 (L. & S.).....	4
Chemistry 1 (L. & S.).....	5
Agronomy 1 or Agricultural Engineering 1, last half of second semester.....	2½
Dairy Husbandry 1, first half of second semester.....	2½
Total.....	17
Military Drill.....	1
Physical Education.....	1

*Students who enter with fourteen credits for entrance but no foreign language must first take beginning German or French, 1. This will be counted as electives outside the College of Agriculture.

OUTLINES FOR THE LONG COURSE IN AGRICULTURE 321

Sophomore Year

FIRST SEMESTER

Chemistry 11Ag. (L. & S.).....	2½
Organic Chemistry 120 (L. & S.).....	2½
Agricultural Bacteriology 1.....	5
Botany 1 (L. & S.).....	5
Horticulture 1.....	3

Total.....	18
Military Drill.....	1
Physical Education.....	1

SECOND SEMESTER

Credits

Agricultural Chemistry 1 and 2.....	5
Mathematics 71 (Engineering).....	5
Soils 1.....	5
Zoology 3 (L. & S.).....	3

Total.....	18
Military Drill.....	1
Physical Education.....	1

Junior Year

FIRST SEMESTER

Botany 129 (L. & S.).....	2
Animal Husbandry 2.....	2
Agricultural Economics 1.....	5
Physics 61 (L. & S.).....	3
Electives.....	5

Total.....	17
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SECOND SEMESTER

Botany 146 (L. & S.) or Physiology 3, (Animal Physiology)	4
Physics 61 (L. & S.).....	3
Electives.....	10

Total.....	17
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Senior Year

FIRST SEMESTER

Major, including Thesis.....	5
Minor, assigned.....	5
Electives.....	6
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Total.....	16

SECOND SEMESTER

Major, including Thesis.....	5
Minor, assigned.....	5
Electives.....	5
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Total.....	15

The total requirements for graduation are 135 credits in addition to military drill and physical education. Beginning with the freshmen who entered in 1915-16, 135 grade points must be earned before graduation from the Long Course. (See p. 81.)

Electives to the amount of fourteen credits may be taken outside the College of Agriculture, in addition to the minor study which may be taken outside the College with the approval of the major adviser.

Students of the Long and Middle Courses may take sixteen to eighteen credits each semester, exclusive of drill and physical education. Electives may be added to make a total of twenty credits provided the student has received a standing of at least 85 per cent in each subject for the preceding semester.

The thesis, or a substitute approved by the adviser, must represent some phase of the student's work in his major study, four credits being given. The instructor in charge of the major subject will act as the student's adviser and will assist in the selection of his minor subject. For farm experience requirement see p. 312.

Outline of Middle Course in Agriculture

Freshman Year

FIRST SEMESTER

Subject	Credits
English 1a (L. & S.).....	3
Chemistry 1 (L. & S.).....	5
Agronomy 1, first half semester.....	2½
Animal Husbandry 1, last half semester.....	2½
Horticulture 1.....	3
Animal Husbandry 2.....	2
<hr/>	
Total.....	18
Military Drill.....	1
Physical Education.....	1

SECOND SEMESTER

Subject	Credits
English 1b (L. & S.).....	3
Chemistry 1 (L. & S.).....	5
Dairy Husbandry 1, first half semester.....	2½
Agricultural Engineering 1, last half semester.....	2½
Soils 3.....	3
Electives in College of Agriculture.....	2
<hr/>	
Total.....	18
Military Drill.....	1
Physical Education.....	1

Sophomore Year

FIRST SEMESTER

Agricultural Bacteriology 1.....	5
Electives.....	11
<hr/>	
Total.....	16
Military Drill.....	1
Physical Education.....	1

SECOND SEMESTER

Agricultural Chemistry 1.....	3
Electives.....	13
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Total.....	16
Military Drill.....	1
Physical Education.....	1

The total requirements for graduation in the Middle Course are 68 credits. Beginning with the class entering September, 1915, 68 grade points will be required in addition to the 68 credits. All Middle Course students are required to take two full years of military drill and gymnasium work. (See p. 323.)

The student shall select his major subject by the beginning of the second year and shall consult the chairman of the department for assignment to an adviser. Before entering this year, a student must have had at least one year of practical farm experience satisfactory to the executive office of the College of Agriculture. (See p. 312.) Six elective credits may be taken outside the College of Agriculture.

Students taking the Middle Course and desiring to transfer to the Long Course must be prepared to spend more than the usual four years, in order to complete the requirements.

SPECIAL ADAPTATIONS OF THE COURSES FOR THE PREPARATION OF TEACHERS OF AGRICULTURE

MIDDLE COURSE

Graduates of the Middle Course who complete Education 1, 6, 11, or 41, for two credits; the course in Agricultural Education 1, 4 credits; and two of the following subjects: Agronomy 140, Animal Husbandry 128, and Dairy Husbandry 110, will be recommended by the Director of the Course for the Training of Teachers to receive a special license to teach agriculture in the schools of Wisconsin. It is suggested that the student select his electives from the following group:

FIRST SEMESTER GROUP

	Credits
Agronomy 120.....	3
Agricultural Engineering 2.....	2
Economic Entomology 101.....	3
Veterinary Science 3.....	2

SECOND SEMESTER GROUP

	Credits
Horticulture 3.....	3
*Poultry 2.....	2
Soils 2.....	3
Veterinary Science 2.....	2
Agricultural Economics 10.....	3

LONG COURSE

Graduates of the Long Course properly registered in the Course for the Training of Teachers, presenting credit in the following special work, will be entitled to receive the University Teachers Certificate, upon recommendation of fitness by the professor of Agricultural Education: Philosophy (1), three credits; Education (1, 6, 11, or 41) two credits; Educational Practice A, two credits; Agricultural Education 1, four credits; Teachers Courses in the College of Agriculture but not in the major department, (Agronomy 140, Animal Husbandry 128, and Dairy Husbandry 110), four credits.

*Given in second semester of first year.

DEPARTMENTS OF INSTRUCTION

LONG AND MIDDLE COURSES IN AGRICULTURE

Abbreviations in the announcement of courses: Yr., throughout the year; I, given during the first semester; II, given during the second semester; I or II, given each semester; cr., credits, i. e., hours of credit. Unless otherwise stated, the number of credits per semester is given.

AGRICULTURAL BACTERIOLOGY

PROFESSORS FROST, HASTINGS (chairman); ASSOCIATE PROFESSOR FRED; ASSISTANT PROFESSOR WRIGHT; INSTRUCTORS BACHMANN, FULMER; ASSISTANTS ROEHM, SIMMONS.

FELLOW, MR. GIBBS.

The courses are planned to meet the needs (1) of students who desire to obtain an idea of the general relations of micro-organisms to natural processes; (2) of students intending to devote themselves to the study of dairy husbandry, soils, veterinary medicine, or foods; (3) of students wishing to prepare themselves for instructional or research work in general or applied bacteriology.

For Undergraduates

1. **General Survey.** I or II; 5 cr. The relation of micro-organisms to soil fertility, to disease, and to foods. Mr. Wright, Mr. Fulmer, and staff.

2. **General Survey.** II; 3 cr. The relation of micro-organisms to decomposition processes. For students in the chemical course. Mr. Hastings, Mr. Wright.

4. **Household Bacteriology.** II; 5 cr. Survey of bacteriology with special emphasis on the relation of micro-organisms to foods and domestic sanitation. Mr. Frost, Miss Bachmann, and staff.

Thesis. Yr.; 2 cr. Prerequisites: courses 1 or 4 and 124 and either 121, 123, or 125. Mr. Fred, Mr. Frost, Mr. Hastings.

For Undergraduates and Graduates

121. **Dairy Bacteriology.** II; 3 cr. Prerequisite: course 1 or 4. Mr. Hastings, Mr. Roehm.

123. **Soil Bacteriology.** I; 3 or 5 cr. Prerequisite: course 1 or 4. Mr. Fred.

124. **Technique,** I; 2 or more cr. Prerequisite: course 1 or 4. Mr. Frost, Mr. Simmons.

125. **Food Bacteriology.** II.; 2 or more cr. Prerequisite: course 1 or 4. Mr. Frost, Miss Bachmann.

For Graduates

230. **Research.** Yr.; 2 or more cr. Prerequisites: course 1 or 4, 124, and either 121, 123, or 125.

231. **Seminary.** Yr.; 1 cr.

AGRICULTURAL CHEMISTRY

Emeritus PROFESSOR BABCOCK; PROFESSORS HART (chairman), McCOLLUM; ASSISTANT PROFESSORS TOTTINGHAM, PETERSON, STEENBOCK; INSTRUCTORS DRESCHER, NELSON, STROWD; ASSISTANTS PITZ, SCHAAL, SIMMONDS, SURE, WHITMORE, WILLIAMS.

The courses offered in this department are intended to give a broad view of farm chemistry, useful to the general agricultural student, and to develop men fitted for instructional or experimental work in the various fields of chemical activity applied to agriculture. Courses 1 and 2 must precede all other courses in the department. Courses 120 to 122 are for students desiring a more detailed knowledge of the special subjects treated and are preliminary to greater specialization. These courses should be preceded or accompanied by work in biology and organic chemistry. Physiology is a desired prerequisite. All other advanced courses in this department are open to undergraduates and graduates who have had the necessary preliminary training.

For Undergraduates

1. **Agricultural Chemistry.** II; 3 cr. Mr. Hart.

2. **Agricultural Analysis.** II; 2 cr. Mr. Tottingham, Mr. Drescher.

3. Household Chemistry. I; 5 cr. Composition and physical properties of foods and their nutritive value. Mr. Peterson.

Thesis. Yr.; 2 cr. May be taken in Plant or Animal Chemistry or in Dairy Chemistry. Mr. Hart, Mr. McCollum, Mr. Peterson, Mr. Tottingham, Mr. Steenbock.

For Undergraduates and Graduates

120. Plant Chemistry. II; 2 or 5 cr. Select methods in the analysis of plant materials and studies of processes of growth. Mr. Tottingham.

121. Dairy Chemistry. I; 2 or 5 cr. Chemistry of milk and its products including the chemistry of fermentation. Mr. Hart, Mr. Drescher.

122. Animal Chemistry. I; 2 or 5 cr. Chemistry of feeds, processes of digestion, metabolic changes involved in nutrition of animals. Mr. McCollum, Mr. Steenbock.

123. Advanced Household Chemistry. II; 3 cr. Composition and fuel value of prepared cereals; proprietary infant foods; soaps and washing powders. Mr. Peterson.

124. Advanced Bio-Chemistry. I or II; cr. to arranged. A survey of important analytical processes used in the study of biochemical problems. Mr. Hart, Mr. McCollum.

125. Sugar Beet Analysis. I; 2 cr. Mr. Strowd.

126. Chemistry of Fungicides and Insecticides. I; cr. to be arranged. A course designed for students in Plant Pathology, Horticulture, and Entomology. Mr. Steenbock.

For Graduates

230. Plant Nutrition. Yr.; hours to be arranged. The influence of various fertilizers on the development and composition of plants. Mr. Hart, Mr. Tottingham.

231. Animal Nutrition. Hours to be arranged. Composition and digestibility of foods and their influence on growth, production of milk, etc. Mr. Hart, Mr. McCollum.

232. Advanced Dairy Chemistry. Yr.; hours to be arranged. The proximate analysis of milk and its products. Changes occurring in manufacture of dairy products. Mr. Hart.

233. Seminary. Yr.; 1 hour. Mr. Hart, Mr. McCollum.

AGRICULTURAL ECONOMICS

PROFESSORS HIBBARD, OTIS, TAYLOR (chairman); ASSISTANT PROFESSOR GALPIN; INSTRUCTORS GUNN, JUVE, WATRUD; ASSISTANTS BECKER, ERDMAN, FOSTER, SAWTELLE.

The courses in Agricultural Economics are intended to give the student a knowledge of the economic principles which relate to the production and marketing of farm products, and to the economic condition of the agricultural classes.

Students who wish to prepare themselves for practical work as farm managers and as citizens interested in agriculture will find courses 1, 8, 10, 12, and 128 adapted to their needs.

Students who wish to prepare for positions as teachers and research workers in the field of agricultural economics will find it desirable to elect courses 224 to 240. Such students should elect courses in the Department of Political Economy to round out their work. Courses 5, 8a, 8b, 130, 135, 251, 260, and 266 are available for this purpose. See also summer session catalogue.

For Undergraduates

1. Principles of Agricultural Economics. I; 5 cr. Mr. Taylor and staff.

8. Farm Records and Accounts. I or II; 2 cr. Mr. Juve.

10. Methods of Farm Management. II; 3 cr. Visits to farms are made the basis of laboratory work. Mr. Otis, Mr. Gunn.

12. Rural Life. II; 2 cr. A study of the country life movement and of the social problems of farm and village. Mr. Galpin.

Thesis. Yr.; 2 cr. Mr. Galpin, Mr. Hibbard, Mr. Juve, Mr. Otis, Mr. Taylor.

For Undergraduates and Graduates

102S. Traveling Field Course in Farm Management. 6 cr. Six weeks in the field. Arrangement must be made in advance. Mr. Otis.

106. Agricultural Geography. II; 3 cr. Mr. Finch.

128. Cooperation and Marketing. II; 3 cr. Mr. Hibbard.

135. Cost Accounting on Farms. II; 2 cr. Mr. Juve.

For Graduates

224. The Premises of Agricultural Economics. I; 2 cr. Mr. Taylor.

225. Rural Social Organization. I; 2 cr. The theory and practice of rural social development; units of rural populations; rural relations of minor cities; rural social surveys. Mr. Galpin.

226. Land Tenure. Yr.; 2 cr. An historical and comparative study of the economic status of the agricultural classes. Mr. Ely, Mr. Taylor.

227. Economic History of Agriculture. II; 2 cr. A study of historical changes and geographical differences in methods of farming. Mr. Hibbard.

240. Research. Opportunity to do research under personal supervision as follows:

On country life. Mr. Galpin.

On credits, cooperation, and marketing. Mr. Hibbard.

On cost accounting and its relation to farm management. Mr. Juve.

On farm surveys and financial accounts in their relation to farm management. Mr. Otis.

On the history of agricultural production. Mr. Taylor.

AGRICULTURAL EDUCATION

PROFESSOR HATCH (chairman); ASSISTANT PROFESSOR JAMES.

The course in Agricultural Education is required of students in the College of Letters and Science who take the Course for the Training of Teachers and minor in Agriculture and of those in the College of Agriculture who take the courses for the training of teachers in agriculture.

For Undergraduates

1. Agricultural Education. II; 4 cr. Origin and development with special reference to the teaching of agriculture in elementary and secondary schools. Methods of teaching secondary agricultural subjects. Mr. James, Mr. Hatch.

For Undergraduates and Graduates

103. Research. Yr.; cr. to be arranged. Mr. Hatch.

AGRICULTURAL ENGINEERING

ASSISTANT PROFESSOR WHITE (acting chairman), LIVINGSTON;
INSTRUCTORS GRIFFITH, SAUVÉ, SCHINDLER; ASSISTANTS JONES,
SMELKER.

The courses in Agricultural Engineering are planned to meet the needs of (1) the students desiring a general knowledge of the use of farm machinery, planning farm buildings, and concrete construction; (2) students intending to become agricultural implement experts; (3) students preparing for instructional or investigational work.

For Undergraduates

1. **General Agricultural Engineering.** First half of I, second half of II; 2½ cr. Required of freshman agricultural students. Mr. White and staff.

2. **Farm Structures.** I; 2 or 3 cr. Prerequisite: course 1 or its equivalent. Mr. Schindler, Mr. Griffith.

3. **Power Machinery.** I or II; 3 cr. Prerequisite: course 1. Mr. White, Mr. Sauvé.

4. **Concrete Construction.** II; 2 cr. Prerequisite: course 1 or its equivalent. Mr. Griffith.

5. **Farm Machinery.** I; 3 cr. Prerequisite: course 1. Mr. White, Mr. Jones.

6. **Farm Machinery.** II; 3 cr. To prepare field experts. Prerequisite: courses 3 and 5 and 14 or equivalents. Mr. White, Mr. Jones.

Thesis. Yr.; 2 cr. Mr. White.

Electives in the College of Agriculture given in the College of Engineering.

7. **Country Roads.** I; 1 cr. Mr. Smith.

13. **General Carpentry.** I or II; 1, 1½, or 2 cr. Special attention to farm needs. Mr. Brunsell.

14. **General Forge and Bench Work.** I or II; 1, 1½, or 2 cr. Special attention to farm tools. Mr. Dabney, Mr. Sladky, Mr. Zurian.

For Undergraduates and Graduates

101. Advanced Gas Engines and Farm Tractors. I or II; 2 cr. Laboratory and field tests of gas engines and farm tractors. Prerequisite: courses 3, 5 and 14. Mr. White.

120. Research. Credits to be arranged. Prerequisites: courses 2, 3, 4, 5, 6. Mr. White.

AGRICULTURAL JOURNALISM

PROFESSOR HOPKINS (chairman); ASSISTANT MCINTYRE.

The courses offered by the Department of Agricultural Journalism are intended to be of special service to students who will engage in farming, or who expect to be employed in station work or in some form of demonstration or extension service; and who, therefore, may have occasion to write for publication and certainly will have farm produce and products to sell. To these ends the work is very largely confined to studies in agricultural writing.

For Undergraduates

1. **Agricultural Journalism.** I; 2 cr. Mr. Hopkins.
2. **Agricultural Editing.** Yr.; 1 cr. Mr. McIntyre.
4. **Advanced Agricultural Journalism.** II; 2 cr. Prerequisite: course 1. Mr. Hopkins.
- Thesis.** Yr.; 2 cr. Mr. Hopkins.

For Undergraduates and Graduates

140. Methods and Problems. II; cr. to be arranged. Mr. Hopkins.

AGRONOMY

PROFESSOR R. A. MOORE (chairman); ASSOCIATE PROFESSOR DELWICHE; ASSISTANT PROFESSORS GRABER, LEITH, STONE; INSTRUCTORS GARLAND, LUNZ, MORTIMER, WRIGHT.

The courses in Agronomy are designed to give a thorough understanding of the general and scientific principles which underlie the production of farm crops; and to prepare students for instructional and research work in agronomy.

For Undergraduates

1. Description, Classification, and Judging of Cereals. First half of I and second half of II; 2½ cr. Mr. Moore and staff.

2. Forage Crops. II; 3 or 5 cr. Uses, distribution, culture, composition, and improvement. Mr. Moore, Mr. Graber.

3. Sugar, Fiber, and Canning Crops. I; 3 cr. Variety, type, cultural methods, and distribution. Mr. Wright.

Thesis. Yr.; 2 cr. Mr. Moore and staff.

For Undergraduates and Graduates

101. Research. Credit to be arranged. Offered at Madison and the branch experiment stations. Permission of instructor required. Mr. Moore and staff.

102. Grasses. I; 2 cr. Varieties, culture, distribution, and uses. Prerequisite: course 1. Mr. Mortimer.

104. Cereals. I; 3 or 4 cr. A detailed study of the uses, distribution, culture, composition, and improvement of grain crops. Prerequisite: course 1. Mr. Leith.

120. Seed Inspection and Weed Control. I; 3 cr. Prerequisite: course 1. Mr. Stone, Mr. Lunz.

121. Advanced Crop Judging. II; 2 cr. Prerequisites: courses 1 and 120. Mr. Stone, Mr. Mortimer.

122. Official Seed Control. I; 2 cr. Includes marketing, warehouse handling, distribution, legislative control, and official testing of agricultural seeds. Prerequisites: Agronomy 1 and 120. Mr. Lunz.

130. Plant Breeding. II; 3 cr. Methods and principles involved in the improvement of farm crops. Prerequisites: Botany 1 and Agronomy 1. Mr. Leith.

131. Seminary. Yr.; 1 cr. Permission of instructor required. Mr. Moore.

140. The Teaching of Agronomy. First half of II; 2 cr. Organization and presentation of subject matter. Prerequisites: courses 1 and 120. Mr. Mortimer.

ANIMAL HUSBANDRY

Emeritus PROFESSOR HENRY; PROFESSOR HUMPHREY (chairman); ASSOCIATE PROFESSOR FULLER; ASSISTANT PROFESSORS KLEINHEINZ, MORRISON, OOSTERHUIS, TORMEY; INSTRUCTORS HARRIS, KUHLMAN; ASSISTANTS SCOTT, MARKEY.

For Undergraduates

1. **Elementary Live Stock Judging.** Last half of I; 2½ cr. Mr. Kuhlman, Mr. Tormey, Mr. Oosterhuis.

2. **Live Stock Management.** I; 2 cr. Mr. Oosterhuis.

Thesis. Yr.; 2 cr. Mr. Fuller, Mr. Harris, Mr. Humphrey, Mr. Kuhlman, Mr. Morrison, Mr. Oosterhuis, Mr. Tormey.

For Undergraduates and Graduates

120. **History of Breeds.** II; 3 cr. Required of students majoring in Animal Husbandry. Prerequisite: course 1. Mr. Fuller.

124. **The Art of Breeding.** II; 2 cr. Prerequisites: courses 1, 2. Required of students majoring in Animal Husbandry. Mr. Humphrey, Mr. Kuhlman.

126. **Live Stock Feeding.** 3 cr. Required of students majoring in Animal Husbandry. First semester for Middle Course students with no prerequisite; second semester for Long Course students, prerequisite: course 1. Mr. Tormey.

127. **Live Stock Pedigrees.** II; 2 cr. Prerequisites: courses 1 and 120. Mr. Fuller.

128. **The Teaching of Animal Husbandry.** I; 2 cr. For students electing work toward a University Teachers Certificate. Mr. Tormey.

130. **Swine and Sheep.** I; 3 cr. Prerequisites: courses 1 and 2. Mr. Fuller, Mr. Kleinheinz.

131. **Horses.** I; 2 cr. Prerequisites: courses 1 and 2. Mr. Fuller.

132. **Beef and Dairy Cattle.** II; 3 cr. Prerequisites: courses 1 and 2. Mr. Tormey, Mr. Oosterhuis.

For Graduates

230. **Live Stock Practice and Problems.** Yr.; 1 to 3 cr. For graduates and students majoring in Animal Husbandry. Prerequisites: courses 1, 120, 124, 126. Mr. Humphrey and staff.

DAIRY HUSBANDRY

PROFESSOR FARRINGTON (chairman); **ASSOCIATE PROFESSOR SAMMIS**; **ASSISTANT PROFESSOR BENKENDORF**; **ASSISTANTS MATTSON, DAHLBERG**.

The department offers instruction in the theory and art of manufacturing dairy products, suited to the needs of (a) farm dairymen, (b) investigators or teachers, (c) managers, operators, or inspectors of creameries, cheese factories, or city milk plants. Students intending to major in this department should elect courses 2 and 3 or 4 at the beginning of the junior year.

For Undergraduates

1. General Farm Dairying. First half of II; 2½ cr. Elementary study of milk, and methods of testing and manufacturing farm dairy products. Lectures, Mr. Farrington; laboratory, Mr. Benkendorf, Mr. Mattson.

2. Advanced Milk Inspection. I; 3 cr. Sanitary and commercial tests of dairy products. Prerequisite: course 1. Lecture, Mr. Farrington; laboratory, Mr. Mattson.

3. Creamery Buttermaking and Dairy Machinery. Yr.; 3 cr. Lecture, Mr. Farrington; laboratory, Mr. Benkendorf.

4. Cheese Making. Yr.; 3 cr. A general survey of commercial varieties. Mr. Sammis and assistants.

5. City Milk Supply and Ice Cream Making. II; 3 cr. Milk ordinances and Board of Health regulations. Prerequisite: course 2. Mr. Mattson.

Thesis. Yr.; 2 cr. Prerequisites: courses 2 and 3, 4, or 5. Mr. Farrington and staff.

For Undergraduates and Graduates

102S. Dairy Practice. 1 cr. for each forty-eight hours of work, with a maximum of 4 credits. Prerequisite: course 1. Mr. Benkendorf.

110. Dairying for Teachers of Agriculture. I; 2 cr. Prerequisite: course 1. Mr. Benkendorf.

120. Advanced Market Milk Problems. Yr.; 3 or 5 cr. Prerequisites: courses 2 and 5. Mr. Mattson.

121. Advanced Butter Yield and Quality. Yr.; 3 to 5 cr. Prerequisites: courses 2 and 3. Mr. Farrington.

122. Cheese Making and Curing. Yr.; 3 or 5 cr. The recovery and utilization of factory wastes; standardization of materials and methods. Prerequisite: course 4. Mr. Sammis.

ECONOMIC ENTOMOLOGY

PROFESSOR WILSON (chairman); INSTRUCTOR GENTNER; ASSISTANTS AEPPLER, FLUKE.

The courses provided in this department are designed primarily to meet the needs of students specializing in other departments. Advanced and special students are expected to be able to do more or less original research upon their own initiative. The course in beekeeping includes both laboratory and field work and special trips are made to apiaries in the vicinity of Madison.

For Undergraduates and Graduates

101. General Economic Entomology. I; 3 cr. Insects and their near relatives. A study of their structure, habits, and general economic importance. Mr. Wilson, Mr. Gentner.

101S. Economic Entomology. 2 cr. First three weeks of summer session. Mr. Wilson.

103. Orchard Insects. II; 3 cr. Insect pests of orchard and bush fruits. Besides a study of life histories, special attention will be given to control methods. Prerequisite: course 101. Mr. Wilson.

105. Garden and Field Crop Insects. II; 3 cr. Insect pests of common garden and field crops and methods for their control. Prerequisite: course 101. Mr. Wilson, Mr. Gentner.

110. Beekeeping. II; 2 cr. A survey of the development of beekeeping and the principles of scientific methods in the production of honey, wax, etc. Special opportunity is given for the study of queen rearing methods. Mr. Wilson, Mr. Aeppler.

115. Seminary. I or II; 1 cr. For advanced and graduate students. Methods of research, etc. Mr. Wilson.

120. Research. Yr.; credits to be arranged. Special assigned problems are here considered to give advanced students a practical working knowledge of research.

Thesis. Yr.; 2 cr. For advanced and graduate students specializing in Entomology. Mr. Wilson.

EXPERIMENTAL BREEDING

PROFESSOR COLE (chairman); **ASSISTANTS BACHHUBER, IBSEN, ROUSE, STEIGLEDER, WOODWORTH.**

The following courses are designed for those who desire a general knowledge of the subjects of heredity and breeding, or who contemplate following these lines, either from the theoretical or practical point of view. Special opportunity is offered those doing advanced work to get practical experience in the methods of experimental breeding.

For Undergraduates

1. Principles of Breeding. I; 2 cr. Elementary principles of heredity as applied to breeding. Mr. Cole.

Thesis. Yr.; 2 cr. Mr. Cole.

For Undergraduates and Graduates

101. Principles of Breeding. I; 2 cr. Lectures and other work of course 1 with laboratory additional. Mr. Cole, Mr. Woodworth.

103S. Practice Work in Experimental Breeding. 2 or 3 cr. Prerequisite: course 101. Mr. Cole.

105. Advanced Genetics. II; 3 cr. Prerequisite: Experimental Breeding 1 or equivalent in Departments of Botany or Zoology. Mr. Cole, Mr. Woodworth.

120. Seminary. Yr.; 1 cr. Consent of instructor required before election. Mr. Cole.

121. Topical Work. Yr.; 2, 3 or 4 cr. Mr. Cole.

For Graduates

225. Research. Yr.; cr. to be arranged. Mr. Cole.

FORESTRY

F. B. MOODY, LECTURER IN FORESTRY.

In Farm Forestry the courses are planned to meet the needs of students both in the Long and in the Short Course in Agriculture desiring a general knowledge of the forestry and economic principles underlying the formation and intelligent protection and use of the farm woodlot. Instruction is given by means of lectures, and of demonstrations on the woodlots of the University Farm.

1. **Farm Forestry.** I; 1 cr. Relation of forestry to agriculture. Care of the woodlot, windbreaks, shelterbelts; starting new trees in the woodlot, methods of propagation, selection and identification of species; measuring the crop, sale value. Mr. Moody.

HORTICULTURE

ASSOCIATE PROFESSOR J. G. MOORE (chairman); ASSISTANT PROFESSORS AUST, JOHNSON, MILWARD; INSTRUCTORS BRANN, HEPLER, POTTER, ROBERTS.

The courses offered in this department are designed to give the student a thorough working knowledge of the principles and practices of the most important lines of horticultural work.

For Undergraduates

1. **Principles of Fruit Growing.** I; 3 cr. Mr. Moore.
2. **Fruit Growing.** II; 2 or 3 cr. Prerequisite: course 1. Mr. Potter.
- 2S. **Horticultural Practice.** 2 cr. (Omitted in 1917.) Mr. Moore.
3. **Vegetable Gardening.** II; 3 cr. Mr. Hepler.
4. **Vegetable Forcing.** I; 3 cr. Mr. Hepler.
- 4a. **Vegetable Forcing.** II; 2 cr. A continuation of Horticulture 4. Prerequisite: Horticulture 4. Mr. Hepler.
5. **Small Fruit Culture.** I; 1 cr. Mr. Moore.

- *6. **Landscape Gardening.** I; 3 cr. Mr. Aust.
- 7. **Plant Propagation.** II; 2 cr. Mr. Moore.
- 8. **Floriculture.** II; 3 cr. Designed for women. Mr. Moore.
- Thesis.** Yr.; 2 cr. Mr. Moore, Mr. Johnson, Mr. Hepler, Mr. Potter.

For Undergraduates and Graduates

120. **Plant Breeding.** II; 3 cr. Methods involved in applying the theories of heredity to the improvement of horticultural plants. Prerequisite: Botany 1 and Zoology 3. Mr. Potter.

121. **Experimental Horticulture.** Yr.; 2 to 5 cr. Planning of experiments, keeping records, and experimental work. Mr. Moore, Mr. Hepler, Mr. Potter.

122. **Systematic Pomology.** I; 4 cr. Students electing this course should have had Horticulture 1 and 2. Mr. Moore, Mr. Potter.

123. **Systematic Olericulture.** I; 2 cr. Prerequisite: Horticulture 3. Mr. Hepler.

124. **Horticultural History.** II; 2 cr. For advanced students. Mr. Moore, Mr. Hepler, Mr. Potter.

*125. **Advanced Landscape Gardening.** II; 2 cr. Continuation of Horticulture 6. Mr. Aust.

PLANT PATHOLOGY

PROFESSOR L. R. JONES (chairman); ASSISTANT PROFESSORS JOHNSON, KEITT, VAUGHAN; LECTURER HUMPHREY; INSTRUCTOR BRANN; ASSISTANTS COERPER, GARDNER, ROARK, WALKER.

For Undergraduates

Thesis. Yr.; 2 cr. Subject should be chosen early, preferably the preceding spring, in order to take advantage of the summer season to secure material. Mr. Jones.

1S. **Plant Pathology.** Last three weeks of summer session. 2 cr. Mr. Vaughan.

For Undergraduates and Graduates

101. **Diseases of Plants.** I; 3 cr. Nature, causes, and remedies, including field and laboratory studies of a typical series of examples.

* See also College of Engineering for lectures on City Planning.

Prerequisites: Botany 1 and Bacteriology 1. Mr. Jones, Mr. Johnson, Mr. Gardner, Mr. Roark.

102. **Methods in Plant Pathology.** I; 3 cr. Parasitic diseases of plants, isolation of parasites, technique of cultural methods, spore germination, and inoculation. Prerequisite: Plant Pathology 101. Mr. Jones, Mr. Walker.

116. **Diseases of Field Crops.** (Omitted 1916-17.)

117. **Diseases of Orchard Fruits.** II; 2 cr. Arranged to meet the needs of students specializing in Plant Pathology and Horticulture. Mr. Keitt, Mr. Roark.

119. **Diseases of Timber, and Forest Protection.***

120. **Diseases of Garden Crops.** II; 2 cr. Arranged to meet the needs of students specializing in Plant Pathology and Horticulture. Mr. Jones, Mr. Walker.

122. **Fungicides in Relation to Host and Parasite.** II; 2 cr. Advanced course, primarily intended for students specializing in Plant Pathology. Prerequisite: Plant Pathology 101. Mr. Keitt, Mr. Roark.

For Graduates

223. **Seminary.** Yr.; 1 cr. Mr. Jones, Mr. Keitt.

225. **Research.** Cr. to be arranged. Mr. Jones, Mr. Johnson, Mr. Keitt.

POULTRY HUSBANDRY

ASSOCIATE PROFESSOR HALPIN (chairman); INSTRUCTORS MUSEHL, HAYES; ASSISTANT JOHNSON.

The Poultry Department is well equipped with houses for laying stock and for brooding chicks. It also has a very complete list of incubators, brooders, and other poultry machinery. The present stock consists of thirty varieties of chickens, six varieties of ducks, five breeds of geese, one breed of turkeys, and one breed of guinea fowl.

For Undergraduates

1. **Poultry Raising.** I; 2 cr. Mr. Halpin.

2. **Poultry Raising.** II; 2 cr. Continuation of course 1. Mr. Halpin.

*For further details see the Forest Products Laboratory, page 445.

3. Poultry Practice. Yr.; 1 to 3 cr. Mr. Hayes.

5. Artificial Incubation and Brooding. II; 1 to 3 cr. Prerequisites: courses 2 and 3. Mr. Hayes.

6. Poultry Judging. I; 3 cr. Mr. Hayes.

7. Advanced Poultry Management. II; 3 cr. Prerequisites: courses 1, 2, and 3. Mr. Mussehl.

8. Market Poultry. I; 1 or 2 cr. Practice in fattening, killing, and dressing. Prerequisites: courses 1 and 3. Mr. Mussehl.

Thesis. 2 cr. Mr. Halpin, Mr. Hayes.

SOILS

PROFESSOR WHITSON (chairman); ASSOCIATE PROFESSOR JONES; ASSISTANT PROFESSORS STEWART, TRUOG, WALSTER, WEIR; INSTRUCTORS GRAUL, ZEASMAN.

Course 1 is prerequisite to all other courses except course 2.

Courses 1, 2, and 120 are general in character and are adapted to the needs of all students of Agriculture. Advanced students specializing in this subject are advised to elect courses in chemistry, soil bacteriology, plant physiology, agronomy, geology, or hydraulics, according to their special needs, during their senior and graduate years. The summer period is particularly suited to advanced work in soil fertility and courses are offered in the summer session for that reason.

For Undergraduates

1. Principles of Soil Physics and Fertility. II; 5 cr. Prerequisite: Chemistry 11Ag. Mr. Walster and staff.

1S. Elementary Soils. 2 cr. Prerequisite: a course in general chemistry. Mr. Walster, Mr. Stewart.

3. Soil Physics and Fertility, Brief Course. II; 3 cr. Required of freshmen, Middle Course. Mr. Jones.

2. Land Drainage. II; 3 cr. Principles and surveying operations. Field work in tile laying. [Mr. Jones, Mr. Zeasman.

Thesis. Yr.; 2 cr. Mr. Whitson and staff.

For Undergraduates and Graduates

120. Soil Management. II; 2 cr. Systems of farming for various types of soils, and relation of these systems to maintenance of fertility. Mr. Whitson.

121. Soil Analysis. I; 3 or 5 cr. Use of special and standard methods in chemical examination of soils. Mr. Walster.

122. Soil Physics. I; 4 cr. Mr. Stewart.

123. Drainage Design. I; 3 cr. Advanced practice in land drainage. Mr. Jones.

124. Plant Nutrition. I; 3 cr. Given 1915-16 and in alternate years. The effects of soil substances upon the plant, including the physiological rôle of fertilizers, soil amendments, and soil water. Mr. Walster.

125. Origin and Classification of Soils and Agricultural Climatology. II; 3 cr. Alternates with course 127. (Given 1916.) Mr. Whitson.

127. Advanced Soil Chemistry. II; 2 cr. The soil constituents, solution, and interacting processes. Methods of soil investigation and interpretation of data. Alternates with course 125. Mr. Truog.

128. Field Management. Yr.; 2 to 4 cr. Physical management and fertility maintenance on special types of soil and on selected farms. Mr. Weir.

For Graduates

231. Research. Mr. Whitson and staff.

232. Seminary. Yr.; 1 cr.

VETERINARY SCIENCE

PROFESSOR ALEXANDER; ASSOCIATE PROFESSOR HADLEY (chairman); ASSISTANT PROFESSOR BEACH; INSTRUCTOR COFFMAN.

The courses detailed below are designed to give students interested in animal production an opportunity to learn how the body is constructed and works. With this as a basis, the more important aspects of live stock sanitation are studied. Especial emphasis is placed on the prevention of animal diseases. The work is made of practical value with the aid of live animals, specimens, models, charts, and other apparatus. These studies introduce the student to terms commonly used in medicine and thus provide a means by which a reading knowledge of veterinary literature may be easily acquired.

For Undergraduates

1. **The Animal Body.** I; 3 cr. Anatomy and physiology. Mr. Hadley.
 2. **Common Diseases of Animals.** II; 2 cr. Special attention to first aid treatment. Mr. Hadley.
 3. **Veterinary Hygiene.** I; 2 cr. Including diseases of the dairy cow. Mr. Alexander.
- Thesis.** Yr.; 2 or 4 cr. Mr. Hadley, Mr. Alexander.

For Undergraduates and Graduates

123. **Conformation and Soundness.** II; 2 cr. The relation of these characteristics to utility. Mr. Alexander.
124. **Topical Work.** Yr.; cr. to be arranged. Mr. Hadley, Mr. Beach, Mr. Coffman.

AGRICULTURAL EXPERIMENT STATION

H. L. RUSSELL, DIRECTOR.

The Wisconsin Agricultural Experiment Station is organically associated with the College of Agriculture and members of the faculty of the College constitute the staff of the station. The purpose of the station is the promotion of agricultural science by research and experimentation. The funds for the work of the station come from both state and federal appropriations. Each of the several departments has research work continually in progress, some members of the staff devoting the major portion of their time to this work. Such subjects are selected as are of the greatest importance to the farmers of Wisconsin, as far as the facilities at hand permit.

The publications of the Experiment Station include an annual report, a series of popular bulletins, a series of research bulletins, a series of circulars of information, and a series of poster bulletins. The popular bulletins, including helpful discussions of the results of experiments, are distributed free to residents of the state upon application and are issued in editions of 20,000 to 50,000 copies. The research bulletins contain technical data and discussions not designated for wide distribution and are sent to libraries, investigators, etc. Thirty annual reports, 274 popular bulletins, 41 re-

search bulletins, 64 circulars, 9 poster bulletins, 16 special bulletins and 41 bankers' bulletins have been issued. Any person desiring to receive the popular bulletins should apply to H. L. Russell, Director, Madison, Wis.

AGRICULTURAL EXTENSION SERVICE

H. L. RUSSELL, DIRECTOR.

The extension work of the College of Agriculture is organized as a service of the several departments of the institution rather than as a distinct department of the College. Under this service three distinct lines of work are carried on as follows:

1. Field demonstration work of the several departments.
2. The county agricultural representative system in which a resident instructor is located in a county.
3. Collective extension instruction given in connection with the farmers' weeks and schools, demonstration trains, etc.

Through this system of giving instruction and practical demonstrations to persons not resident at the College, many thousands of rural people who are unable to come to Madison for resident instruction are aided directly by the work of the College. Much of the work is organized on the project basis, and is partly supported by federal funds. Persons desiring to receive printed matter and other information relative to this work should apply to K. L. Hatch, Assistant Director.

FARMERS' INSTITUTE

E. L. LUTHER, SUPERINTENDENT.

ALICE HIBBARD, CLERK.

The Department of Farmers' Institutes of the College of Agriculture is maintained by a legislative provision which appropriates \$20,000 annually for the purpose of conducting Farmers' Institutes at various places throughout the state. The superintendent, in cooperation with the Wisconsin Live Stock Breeders' Association and the Wisconsin Horticultural Society, assisted by special conductors and workers, plans to conduct 125 Two-day, 22 Fruit, 20

Drainage and Light Soils, 20 Baby Beef, 16 One-day, 30 Potato, 10 Poultry, 6 Junior, and 14 Canning Institutes, during the year 1916-17. At each institute "follow-up" work is arranged with farmers having problems and this "follow-up" work will result in summer field demonstrations and institutes.

A **Farmers' Institute Bulletin** is issued annually in an edition of 30,000 copies and is distributed free of charge. A **Women's Bulletin** is also issued annually in an edition of 13,000 copies and distributed free of charge.

COURSES IN HOME ECONOMICS

The Department of Home Economics is connected with the College of Agriculture for administrative purposes and the faculty of this College gives instruction in certain subjects, such as food chemistry and bacteriology.

The faculties of the various other colleges, schools, and courses of the University give instruction in certain required and elective subjects offered to students taking the Course in Home Economics.

Facilities for Instruction

The Department of Home Economics is located in the Home Economics Building, where offices, classrooms, and laboratories are provided, and in the practice cottage where the work in household management, house decoration, and dietetics have ample scope for practical solution. The department is provided with all the necessary furnishings and apparatus to give thorough instruction in the subjects of house and institutional management and sanitation, art and design, food preparation, dietetics, textiles, sewing, dressmaking, and house decoration.

The new equipment of the department and the well appointed laboratories give an opportunity for theoretical and practical training in home economics not heretofore available. There is abundant opportunity for study and practice both individually and in classes.

The work in chemistry and bacteriology, as applied to home economics, is done in sections of the laboratories set aside for this work. The courses given in the College of Letters and Science are taken in various classrooms of that College. Electives may be

chosen in other colleges of the University, according to the nature of the work. Women taking the Course in Home Economics are granted the same privileges of residence in Chadbourne Hall and Barnard Hall, the women's dormitories, and in the use of the women's gymnasium, etc., as other women of the University.

Terms of Admission

Students are admitted to this department on the same basis as are students of other courses in the University. See Index under Entrance Requirements.

Fees and Expenses

See Index under Laboratory and Tuition Fees.

Degree

The degree of Bachelor of Science (Home Economics) is conferred upon those who complete 120 credits, of which 36 to 40 are in Home Economics. Beginning with the freshmen who entered September, 1915, 120 grade points will be required for graduation. (See p. 81.)

Scope of the Courses in Home Economics

The Department of Home Economics offers the following courses which deal with the principles which underlie the proper management of the home, care of children, hygienic and sanitary conduct of institutions, and the economic conditions affecting the work of women.

The courses are planned to meet the needs of five classes of students:

1. Those students who desire a general knowledge of the subject matter as a basis for application in the study of the general arts and sciences as a part of a liberal education;
2. Those students who desire to make a detailed study of home economics in its relation to the arts and sciences which are fundamental in the management of the home;
3. Those students who wish to teach home economics in the secondary schools and in higher institutions;
4. Graduate students who have the requisite knowledge to benefit by research in subjects connected with the home;

5. Those who wish to prepare themselves for other vocations than teaching or home-making, or for vocations which can be carried on in connection with other lines of work.

The courses in the related sciences as chemistry, physics, physiology, zoology, bacteriology, and economics, are given in the different colleges of the University.

Outline for Course in Home Economics

Students entering with two units of German or French must take 8 credits of German or French in the University.

Students entering with any language other than German or French will be required to take 16 credits in German or French in the University. The 8 credits of beginning language will be counted as electives.

Students entering with no language, but having fourteen units for entrance, must take 16 credits of German or French, 8 of which will count as electives.

Freshman Year

FIRST SEMESTER

	Credits
English 1a (L. & S.), a study of the elements of efficient writing with practice in composition.....	3
German 2a; or French 10, and 13 or 15 (L. & S.), general courses adapted to the requirements of the student.....	4
Chemistry 1 (L. & S.), lectures and laboratory work in general chemistry and qualitative analysis.....	5
Home Economics 5, introduction to textile study.....	2
Home Economics 9, introduction to home economics.....	1
Total.....	15

SECOND SEMESTER

English 1b, a continuation of 1a.....	3
German 2b; French, same as first semester.....	4
Chemistry, same as first semester.....	5
Home Economics 3, selection and preparation of foods.....	3
Total.....	15

Sophomore Year**FIRST SEMESTER****Credits**

Physics 65 (L. & S.), lectures and laboratory practice in general physics.....	3
Agricultural Chemistry 3, (Household).....	5
Physiology 1 (L. & S.), a general course of lectures and laboratory work in the elements of human anatomy and physiology.....	3
Home Economics 2, Art and Design.....	3
Electives.....	1 or 2
Total.....	15 or 16

SECOND SEMESTER

Physics 65 (L. & S.), same as first semester.....	3
Bacteriology 4, lectures and laboratory work with bacteria as concerned with water, milk, other food supplies, and materials to be found in the household.....	5
*Home Economics 50, textiles.....	3
Electives.....	3 or 4
Total.....	14 or 15

Junior Year**FIRST SEMESTER****Credits**

Home Economics 11, manufacture and selection of clothing	3
Home Economics 7, home architecture and sanitation.....	5
Home Economics 4, economic problems of food supply.....	3
Electives.....	4
Total.....	15

SECOND SEMESTER

Home Economics 8, household decoration.....	4
Home Economics 6, dietetics.....	4
Home Economics 11, manufacture and selection of clothing	3
Electives to be chosen as indicated below.....	4
Total.....	15

*Not required in the Food major.

Senior Year**FIRST SEMESTER**

	Credits
Home Economics 10, household management.....	4
Thesis to be assigned in connection with major study.....	2
Electives to be chosen as indicated below.....	9
Total.....	15

SECOND SEMESTER

Home Economics 109, humanics.....	4
Home Economics Electives.....	2
Thesis.....	2
Electives to be chosen as indicated below.....	7
Total.....	15

Electives

Opportunity is given in the junior and senior years for the election of related courses of study in various lines adapted to the requirements of the students. Information concerning electives will be furnished students upon application.

The following electives are recommended for those desiring to teach home economics: Agricultural Chemistry 122—animal chemistry; Botany 1—general botany; Chemistry 11—quantitative analysis, 120—organic (I); Education 6—public education, 41—educational psychology; English 30—general survey of English literature; Horticulture 6—landscape gardening, 8—floriculture; Philosophy 1—psychology, 103 and 104—experimental psychology; Political Economy 1a and 1b—elements of economics, 130—statistics, 139—social psychology, 141—poverty and relief; Zoology, 4—elementary zoology; Bacteriology 124 and 125.

Majors in Home Economics

Instead of taking the general course as outlined on page (347) at the beginning of the junior year, the student may specialize in either Textiles or Foods, choosing one of the majors indicated in the following paragraphs. The requirements for a major in Home Economics are not less than 26 credits nor more than 30

credits in strictly home economics subjects taken during the junior and senior years.

(1) Textiles. The students who major in Textiles will include beyond the work in the freshman and sophomore years, home economics courses carrying at least 22 credits, and thesis with other electives to make 120 credits. Courses in history, art, economics, sociology, advanced chemistry are suggested as electives. On the completion of the major in Textiles the graduate may enter commercial pursuits, or teach domestic art in the high school or textiles in college.

(2) Foods. The students who major in Foods will include, beyond the sophomore year, home economics courses carrying at least 22 credits, and thesis 4 credits, and other electives to make 120 credits. Electives may include advanced courses in chemistry, physiological chemistry, bacteriology, political economy, history, English, commerce (accounting and commercial law). This course may prepare the student to take a position as dietitian, institutional manager, or teacher of domestic science in the high school, or of food and dietetics in college.

In case the student elects the majors under (1) or (2) the following outline will be followed:

Junior Year

FIRST SEMESTER		Credits
Major.....		8 or 9
Electives (open in any college).....		6 or 7
Total.....		15

SECOND SEMESTER

Major.....	7 or 8
Electives (open in any college).....	7 or 8
<hr/>	
Total.....	15

Senior Year

FIRST SEMESTER		
Major.....		4
Thesis.....		2
Electives (open in any college).....		9
Total.....		15

SECOND SEMESTER

	Credits
Major.....	4
Thesis.....	2
Home Economics 109, humanics.....	4
Electives (open in any college).....	5
Total.....	15

Minors in Home Economics

A minor in Home Economics is not less than 15 nor more than 20 credits in home economics subjects. The minors may be taken with the major but as a rule the minor is intended for those majoring in Letters and Science and desiring a more intensive and also a broader view of home economics problems. A minor may be taken in Foods, Textiles, or Housing Problems.

(1) The minor in Foods must include Home Economics 1, 3, 4, and other related courses to make 15 to 20 credits.

(2) The minor in Textiles must include Home Economics 2, 5, 11, and other related courses to make 15 to 20 credits.

(3) The minor in Housing Problems is intended to be taken with a major or minor in Sociology so that those intending to do the work of sanitary inspector or other social settlement work will have a broad foundation knowledge of the fundamental problems in housing conditions. This minor includes Home Economics 2, 7, 8, 10, for which the prerequisites are Physics 1, Bacteriology 4.

Educational Requirements for State Teachers Certificate

Graduates receiving the B. S. degree in Home Economics will be entitled to receive the University Teachers Certificate, upon the recommendation of fitness by the Department of Home Economics and upon completing as a part of their elective work, the following educational courses: Psychology, 3 cr.; Education, 5 cr.; Departmental Teachers Course, 2 cr. A minimum of ten credits of professional work is required. Courses numbered in the nineties may be counted as additional professional credits but are not to be counted as part of the 120 credits for graduation.

Thesis

All candidates for a degree from the University are required to present a graduating thesis or to take a thesis course which must be acceptable to the professor at the head of the department. These must represent original work upon some subject which has been arranged after consultation with the student's adviser and the head of the department in which the work is done.

DESCRIPTION OF THE COURSES

PROFESSOR MARLATT (director); **ASSOCIATE PROFESSORS DANIELS, SCHMIT**; **ASSISTANT PROFESSORS BINZEL, KELLEY**; **INSTRUCTORS AMERY, BOEING, BRECKON, DODGE, EARL, ECKHARDT, GRADY, HUNT, MANNING, PARSONS, ROBINSON, J. A. TURNER**; **ASSISTANTS COWLES, CULLINAN, KEPHART, MILLER, WILLSON.**

For Undergraduates

1. **General Survey.** Yr.; 3 or 6 cr. I: Food; II: The house plan, first aids, cost of living, etc. Miss Parsons, Miss Marlatt.
2. **Art and Design.** I or II; 3 cr. Miss J. A. Turner, Miss Grady.
3. **Principles of the Selection and Preparation of Food.** II; 3 cr. Prerequisite: entrance credit in physics or chemistry or first semester of Chemistry 1. Miss Marlatt and staff.
4. **Economic Problems of the Food Supply.** I; 3 cr. Continuation of course 3. Prerequisites: Agricultural Chemistry 3, Home Economics 3. Miss Hunt.
5. **Introduction to Textile Study.** I; 2 cr. Drafting, sewing, and textile study. Miss Manning and staff.
6. **Nutrition and Dietetics.** II; 4 cr. Prerequisites: Home Economics 3, 4, Physiology 1, Bacteriology 4, Chemistry 1, Agricultural Chemistry 3. Miss Daniels.
7. **House Architecture and Sanitation.** I; 5 cr. Prerequisites: Physics 1 or 1 Sc., Bacteriology 4, Home Economics 2. Miss Marlatt and staff.
8. **Household Decoration.** II; 4 cr. Artistic and economic problems. Prerequisites: Home Economics 2, 5, 7. Miss J. A. Turner, Miss Grady.

9. Introduction to Home Economics. I; 1 cr. Lecture course required of freshmen in Home Economics. Home Economics Faculty.

10. Household Management. I; 4 cr. Prerequisites: Chemistry 1, Agricultural Chemistry 3, Bacteriology 4, Physics, 1 or 1 Sc., Home Economics 2, 3, 4, 5, 6, 7, 8. Miss Marlatt.

11. Manufacture and Selection of Clothing. Yr.; 6 cr. Prerequisites: Home Economics 2 and 5. Miss Schmit and staff.

50. Textiles. II; 3 cr. Historical, economic, chemical, hygienic treatment. Prerequisites: Chemistry 1, Agricultural Chemistry 3, Home Economics 5. Miss Eckhardt and staff.

91s. Millinery. 2 cr. Summer school only. Miss Schmit.

92S. Hand and Machine Sewing for Teachers. 2 cr. Summer school only. Miss Manning.

95. Household Crafts. I; 2 cr. Miss J. A. Turner.

96. Household Crafts. II; 1 cr. Miss Schmit.

97. Costume Design. I; 3 cr. Prerequisites: Home Economics 11. Required in major in Textiles. Miss Schmit.

98. Experimental Cookery. I; 1 cr. Open to upper class students in Home Economics. Miss Marlatt, Miss Daniels.

For Undergraduates and Graduates

101. Research. Yr.; credit to be arranged. Miss Daniels, Miss Eckhardt.

102. Topical Work. Yr.; credit to be arranged. May precede or be taken in connection with course 101. Miss Daniels, Miss Eckhardt.

103. Economic History of Textile Industry. I; 2 cr. Development of the textile industry from medieval industrial organization to present day problems of factory and sweatshop work. Miss Eckhardt.

104. History of Costume in its Sociological Aspect. I; 2 cr. Miss Schmit.

105. Experimental Food Study. I; 2 cr. Limited to seniors and graduate students. Miss Daniels.

109. Humanics. II; 4 cr. Open to seniors in Home Economics and seniors in the College of Letters and Science who have taken biology. Miss Marlatt.

120. Seminary. II; 1 cr. Miss Marlatt.

121. Teachers Course. I or II; 2 cr. Prerequisites: Home Economics major or minor. Miss Binzel.

122. Institutional Management. II; 4 cr. For seniors and graduates in Home Economics. Miss Breckon.

123. Seminary in Housing Problems. I; 3 cr. Miss Marlatt.

125. Dietetics in Disorders of Nutrition. I; 3 cr. Prerequisites: Home Economics 6, Agricultural Chemistry 122. Required in major in Food. Miss Daniels.

LAW SCHOOL

H. S. RICHARDS, DEAN, PROFESSOR OF LAW.

Resources of the Law School

The Law School is supported by annual appropriations from the Board of Regents, and by the Mortimer M. Jackson Professorship of Law. The late Judge Mortimer M. Jackson by his will gave \$20,000 to the University, the income to be used to maintain a chair of law. The Regents in 1890 formally established the Mortimer M. Jackson Professorship of Law. Judge Jairus H. Carpenter, for many years Dean of the Law School, was the first incumbent of this chair, which he held until his death in 1913.

Object of the Course

The Law School offers a course of study covering a period of three years. It is designed to teach the fundamental principles of the English and American law in a thorough manner, and to fit the student for the active practice of the profession.

Admission

Students applying to the Law School may be admitted as are students in other departments by either of two methods:

First, on certificates from accredited schools or colleges;

Second, on examination at the University.

Applicants for admission to the Law School as candidates for a degree must satisfy the general requirements of the University (see Index under Admission), and in addition, must present credits equivalent to the freshman and sophomore years in the College of Letters and Science. The above requirements may be satisfied by work done in any reputable college or university. Graduates of the regular course in the several state normal schools of Wisconsin will be admitted as candidates for a degree.

Applicants for admission who can satisfy the general entrance requirements will be admitted as unclassified students and entitled to all the privileges of the school in the way of instruction. An opportunity is thus afforded to prepare for the bar examinations in this and other states.

The examinations are conducted at the same time and by the same members of the faculty as the examination of candidates for admission to the College of Letters and Science.

In addition to the other entrance requirements, all candidates for admission to the Law School, whether graduates of accredited high schools or not, are required to take the regular entrance examination in English required for admission to the College of Letters and Science (see Index under Admission), except,

(a) Students of the University who have already passed such examination;

(b) Graduates of other approved colleges and universities. But the Faculty may require any student to take additional work in English, if, in their judgment, it is necessary.

Those intending to apply for examination for admission to the first year class, or for advanced standing, should notify the Registrar of the University before the beginning of the year, and apply for directions, as examinations cannot be taken later.

Examinations for admission to the first year class will be held on June 20-21, and September 24-25, beginning at 9 o'clock.

Pre-legal Courses

The following courses approved by the Association of American Law Schools are suggested for students preparing for the study of law, where only two years are devoted to such work: English (rhetoric and composition), two years; Latin or Greek, two years; German or French, two years; mathematics, or a natural or physical science, one year; history (including English and American constitutional history), two years; psychology. If three or more years be devoted to such preparation, additional courses in history, natural science, and courses in philosophy, political science, economics, and sociology are suggested.

Advanced Standing

Candidates for advanced standing who can comply with the general entrance requirements of the school as above set out will be given equivalent credit for satisfactory work done in other law

schools in good standing having a three-year course, upon presenting properly authenticated certificates of such work. The right is reserved to require examinations in all cases where the credits presented are not regarded as equivalent.

Students who have been graduated from the College of Letters and Science, and who, while students in that College, have elected and earned twenty credits in the Law School, will be admitted to the second year. To meet the above requirement, the student must elect courses offered in the first year of the law course.

All persons from other universities or colleges who intend to apply for advanced standing under the above rules should forward or present their credentials to the Dean of the School at least one week before the opening of the particular session which the student desires to attend.

Graduation

The degree of Bachelor of Laws will be conferred upon all candidates of good character who are at least twenty-one years of age, and have complied with the following conditions:

(1) Credit for at least seventy-four credit hours with a weighted average of fair (a credit is the equivalent of one hour a week for a semester).

(2) Residence of at least three years in a law school of good standing, having a three-year course, one year of which must have been in this School.

(3) Completion of a seminary course in public and private law covering the equivalent of two hours per week for a semester. By permission of the Dean a student may write a thesis with equivalent credit in lieu of the thesis course.

(4) Students completing the course with distinguished ability and presenting a thesis of unusual merit will be recommended for the degree with honor.

(5) After July 1, 1916, there shall be required for the degree of LL. B., in addition to all existing requirements, a clerkship of not less than six months in an accredited law office. This requirement may, at the option of the student, be absolved by two periods of not less than three months each. It must be entirely absolved at a time when the student is not in attendance upon the University, and after the student shall have received credit for not less than twenty semester hours in the Law School.

Admission to the Bar

The statutes of the state provide that any resident graduate of the Law Department of the University of Wisconsin shall be admitted to practice in all of the courts of this state by the supreme court upon the presentation of his diploma, and may be admitted to the supreme court when not in session by an order signed by one of the justices thereof and filed with the clerk of said court. (R. S. Wis., sec. 2586.)

Under this statute and a rule of the federal court, it is customary for the graduating class, on motion of a member of the Faculty, to be admitted to the supreme court of the state, and to the district and circuit courts of the United States, immediately upon graduation. This entitles them to admission to the bar of any court of record in Wisconsin and all federal courts.

COURSES OF INSTRUCTION

Abbreviations in the announcement of courses: Yr., throughout the year; I, given during the first semester; II, given during the second semester; I or II, given each semester; cr., credits, i. e., hours of credit. Unless otherwise stated, the number of credits per semester is given.

The courses of instruction are arranged to present, as far as possible, the fundamental topics of the law during the first year, and the specialized subjects during the second and third years.

First Year

Agency. II; 3 cr. Wambaugh's *Cases on Agency*. Mr. Wilkie.

Briefmaking. I; 1 cr. Cooley on *Briefmaking*, 3rd ed. and assigned problems. Mr. Wickhem.

Common Law Pleading. I; 2 cr. Whittier's *Cases on Common Law Pleading*. Mr. Rundell.

Contracts. Yr.; 7 cr. (total for the year) Keener's *Cases on Contracts*, 2nd ed. Ballantine's *Problems in Contracts*. Mr. Richards.

Criminal Law. II; 4 cr. Beale's *Cases on Criminal Law*. Mr. Gilmore.

Property I. (Personal) I; 2 cr. Gray's *Cases on Property*, 2nd ed. Vol. I. Mr. Wilkie.

Property I. (Real) II; 3 cr. Gray's *Cases on Property*, 2nd ed. Vol. I. Mr. Rundell.

Torts. I; 4 cr. Ames and Smith's *Cases on Torts*. Mr. Gilmore.

Second and Third Years

Administrative Law I. 2 cr. Officers and elections. Selected Cases and Goodnow's *Cases on the Law of Public Officers*. Mr. Hall. (Omitted 1916-17.)

Administrative Law II. 2 cr. The law governing administrative action. Freund's *Cases on Administrative Law*. Mr. Hall. (Omitted 1916-17.)

Administrative Law III. I; 2 cr. The law of taxation. Goodnow's *Cases on Taxation*. Mr. Hall.

Administrative Law IV. II; 2 cr. Municipal corporations. Selected cases and Beale's *Cases on Municipal Corporations*. Mr. Hall.

Bankruptcy. 2 cr. Holbrook & Aigler's *Cases on Bankruptcy*. Mr. Wilkie. (Omitted 1916-17.)

Bills of Exchange and Promissory Notes. I; 4 cr. Smith & Moore's *Cases on Bills and Notes*. Mr. Wilkie.

Code Pleading. Yr.; 4 cr. (total for the year). Hinton's *Cases on Code Pleading*. Mr. Boesel.

Code Practice. Yr.; 4 cr. (total for the year). Hinton's *Cases on Code Practice*. Mr. Sanborn.

Conflict of Laws. II; 3 cr. Beale's *Cases on Conflict of Laws*, shorter ed. Mr. Page.

Constitutional Law. Yr.; 6 cr. (total for the year). Hall's *Cases on Constitutional Law*. Mr. Gilmore.

Conveyancing. I; 3 cr. Gray's *Cases on Property*, Vol. III. Mr. Rundell.

Corporations. Yr.; 4 cr. (total for the year). Richards' *Cases on Corporations*. Mr. Richards.

Criminal Procedure. 1 cr. Mikell's *Cases on Criminal Procedure*. Mr. Gilmore. (Omitted 1916-17.)

Damages. 2 cr. Beale's *Cases on Damages*. Mr. Wilkie. (Omitted 1916-17.)

Equity I. I; 3 cr. Ames' *Cases on Equity Jurisdiction*, Vol. I and II. General principles, specific performance and injunctions. Mr. Smith.

Equity II. II; 3 cr. Ames' *Cases on Equity Jurisdiction*, Vol. II and Keener's *Cases on Equity Jurisprudence*, Vol. III. Nuisance, account, interpleader, cloud upon title, reformation and rescission. Mr. Smith.

Equity Pleading. 1 cr. Selected cases. (Omitted 1916-17.)

Evidence. II; 4 cr. Thayer's *Cases on Evidence*. Mr. Smith.

Future Interests. II; 4 cr. Gray's *Cases on Property*, Vol. V, and selected cases. Future interests in land, powers, the rule against perpetuities, restraints on alienation at common law and in Wisconsin. Mr. Rundell.

Insurance. I; 2 cr. Wambaugh's *Cases on Insurance*. Mr. Wilkie.

International Law. II; 2 cr. Scott's *Cases on International Law*. Mr. Hornbeck.

Mortgages. 2 cr. Kirchwey's *Cases on Mortgages*. Mr. Wilkie. (Omitted 1916-17.)

Office Practice. II; 1 cr. Mr. Wilkie.

Partnership. 3 cr. Gilmore's *Cases on Partnership*. Mr. Rundell. (Omitted 1916-17.)

Persons. II; 2 cr. Kales' *Cases on Persons*. Mr. Wilkie.

Practice Court. II; 1 cr.

Professional Ethics. II; no credit. Chief Justice Winslow.

Property II. II; 2 cr. (Rights in the land of another, natural rights, easements, covenants as to use of land.) Gray's *Cases on Property*, Vol. II. Mr. Wilkie.

Property III. See Conveyancing.

Property IV. II; 3 cr. Wills and Administration. Gray's *Cases on Property*, Vol. IV. Mr. Page.

Public Service Companies. II; 2 cr. Green's *Cases on Carriers*. Mr. Gilmore.

Quasi-Contracts. I; 3 cr. Thurston's *Cases on Quasi-Contracts*. Mr. Smith.

Sales. I; 3 cr. Williston's *Cases on Sales*. Mr. Smith.

Suretyship. 2 cr. Ames' *Cases on Suretyship*. Mr. Wilkie. (Omitted in 1916-17.)

Theory of Legislation. II; 2 cr. Mr. Lloyd-Jones.

Thesis Course. Legal History. II; 2 cr. Mr. Page.

Trusts. I; 4 cr. Ames' *Cases on Trusts*. 2nd ed. Mr. Rundell.

Required and Elective Courses

Candidates for the degree are required to take all the subjects of the first year, twelve hours of work in the second year, and twelve hours in the third year. The work of the second and third years is elective except the course in the History of Law required of all candidates for a degree. Second year students may elect not less than twelve nor more than fourteen hours in courses offered in the second year. Second year students who are graduates of the College of Letters and Science, and who have not completed all the courses of the first year, will be required to include such omitted courses in their list of electives. Third year students may elect not less than twelve nor more than fifteen hours in courses offered in the third year and in courses not already taken by them when second year students. No student is permitted to count more than twelve hours of work in any one semester towards the total hours required for the degree. Elections in all cases are subject to the approval of the Dean.

Procedure and Practice Courses

Courses in Procedure and Practice extend throughout the last two years and comprise Common Law Pleading, two credits, Code Pleading, four credits, Equity Pleading, one credit, Code Practice, four credits, and Criminal Procedure, one credit. The purpose of the courses is to instruct the student in the principles of pleading and practice at common law and under the codes, by duplicating as far as possible the steps taken by an active practitioner in the preparation for trial of cases at law and in equity throughout the entire field of litigation. The student is required to prepare pleadings in assigned cases, and to carry a cause of action through the various steps from its inception to the final judgment. A practice court is maintained in connection with the work in code practice.

Elective Studies

Students of the Law School will be permitted to pursue studies in other departments of the University, but not for credit toward the law degree.

Students in the College of Letters and Science will be permitted to elect, as a part of their undergraduate course, studies in the Law School for which see Index, under Election.

Examinations

Written examinations are held at the close of each semester and of the summer session.

Library

The Library of the Law School contains 25,500 bound volumes, comprising the official reports of the various states and territories and of the United States; a complete set of English, Irish, and Canadian reports; the Reporter System; the various series of selected cases, as American Decisions, American Reports, American State Reports; Lawyers' Reports Annotated; duplicates of the more important reports; complete sets of the leading law periodicals; the leading encyclopedias of law and other works of reference; a large collection of textbooks, statutes, digests, etc.

Students are allowed free access to the books. The Library is open each week day from 8 A. M. to 10 P. M.

For information concerning the other libraries accessible to students, see Index under Library.

The University

Students of the Law School may pursue studies for which they are prepared, in other departments of the University, without additional fees in so far as such studies do not interfere with their work in the Law School. Before registering in other departments, the student must obtain permission from the Dean of the Law School.

Law Clubs

A number of law clubs and a practice court are maintained by the students, in which questions of law are argued and decided.

Fees and Expenses

All fees are payable in advance at the office of the Secretary of the Regents. (See Index under Tuition and Fees.) Admission to membership in the classes is not permitted until the fees are paid. No deductions are made for absences, nor for failure to begin at the opening of the year, nor is extension of time allowed for payment of fees.

Receipts showing the payment of tuition must be filed with the Dean within ten days after entry.

It is most desirable that each student should provide himself with his own textbooks and books of selected cases which are designated in the program of instruction. These books may be obtained from the University Cooperative Association at a considerable discount from the quoted prices. The books required for the first year can be obtained for about \$35 and for the second and third years for about \$65.

The expenses of living are moderate. (See Index under Expenses.)

Students desiring information in regard to boarding places, or general information as to expenses, should address their inquiries to the Secretary of the Regents.

A careful perusal of this general statement, it is believed, will supply all needed information; but should further inquiries as to admission, examination, etc., be necessary, they should be addressed to the Dean of the Law School, Madison, Wis.

Summer Session

The summer session established in 1907 is a regular session of the School. The courses offered are not review courses nor abbreviations of the subjects presented during the regular session. The lectures are given by regular members of the Faculty assisted by experienced teachers from other law schools. Full credit toward the degree in Law is given for all work successfully completed. An opportunity is thus afforded to those who for any reason are unable to attend the regular session to obtain thorough and systematic legal instruction. By taking advantage of the summer sessions regular students of the School can materially shorten the calendar period of residence required for the degree.

The session of 1917 begins June 25 and continues until August 31. For summer session courses, see p. 465.

MEDICAL SCHOOL

C. R. BARDEEN, DEAN, PROFESSOR OF ANATOMY.

Aims

The aims of the Medical School are fourfold:

1. To encourage a thorough preliminary medical education, and to offer adequate facilities for a thorough preparation for clinical work.
2. To promote the development of preventive medicine and hygiene.
3. To stimulate research in the sciences upon which modern medicine is based.

Admission Requirements in the Medical School

For matriculation without condition in the Medical School a student must furnish evidence:

1. That he has satisfied the requirements for admission to the College of Letters and Science.
2. That he has completed at least the equivalent of two years of work in this College.
3. That he has successfully pursued laboratory courses of college grade in physics, chemistry, and biology.
4. That he has studied elementary Latin.
5. That he has a reading knowledge of French or German.

Admission to Advanced Standing

A student who has completed elsewhere work equivalent to that required for matriculation and to that of the first year of the medical curriculum may be admitted to the second year of the medical course.

Medical Certificates

Upon the successful completion of the two years of the medical curriculum at Wisconsin, a student will be given a formal certificate. A student who completes less than the two years of the Medical Course may, however, obtain credentials covering the premedical and medical studies which he has pursued.

Degrees

The Medical School offers merely the first two years of a four-year medical curriculum and confers no degrees. The College of Letters and Science confers the degree of Bachelor of Science upon the students registered during the junior and senior years in the Medical School, and the degree of Bachelor of Science or of Bachelor of Arts upon students registered during the senior year in the Medical School. The degrees of Master of Science, Doctor of Philosophy, and Doctor of Public Health are conferred by the University Faculty upon graduate students who specialize in the medical sciences and fulfill the requirements of these degrees, which are described in the section devoted to the Graduate School.

Bachelor of Arts

The regular requirements for the degree apply to those students who elect the work of the first year of the medical course during the senior year in the College of Letters and Science.

Bachelor of Science

(Medical Science Course)

Students in the College of Letters and Science who are candidates for this degree are required to take the following studies:

a. English: 6 credits (3 hours per week per semester) to be taken in the first year of residence.

b. Foreign language. (1) A knowledge of elementary Latin (equivalent to two years of high school Latin); (2) A reading knowledge of German or French. This reading knowledge shall be determined by the respective departments and will ordinarily be the equivalent of six credits beyond first year French or of four credits beyond second year German. At least two years of work in foreign language shall be taken in college.

c. Courses in physics, chemistry, biology, and the medical sciences as outlined in the requirements of the Medical School. The requirements made of candidates for the degree of Bachelor of Arts that six unit hours shall be elected in either history or mathematics does not apply to candidates for the degree of Bachelor of Science (Medical Science Course).

d. The "credit" is the standard for computing the amount of work required for graduation. This is equal to one hour of recitation or lecture per week for one semester. Students are expected to take 15 credits per week in recitations, lectures, and laboratory work, making 30 credits per year, and 120 for the course. The same number of grade points are also required (For details see p. 81). In addition, two hours per week (one credit per semester) of gymnastics are required of men, and four hours per week (two credits per semester) of women, during the first two years. Men are required to drill two hours per week during the first two years for which four credits are given. The total requirements for classroom work, military drill, and the gymnasium are, therefore, 128 credits.

No student will be permitted to receive credit toward graduation for more than eighteen credits in one semester in regular studies except by permission of the Faculty obtained in advance. Candidates for the degree of Bachelor of Science cannot count toward graduation more than sixteen credits in any one semester unless the standings are 85 or above.

e. Major Study. At the beginning of the sophomore or the junior year, every candidate for the degree of Bachelor of Arts or Bachelor of Science shall elect as his major subject work in some one department. This department will determine the manner in which the work of the major shall be completed.

f. Thesis. All candidates for a baccalaureate degree are required to present a graduating thesis, the subject of which must be approved by the student adviser and the chairman of the department in which the candidate is doing the work represented by the thesis. The thesis must represent some phase of the student's work in his major study, and must have the character of a scholarly dissertation on the subject.

Choice of Courses

The student who enters the College of Letters and Science with the intention of studying medicine should arrange his work so that he can take up systematically the work required for medical credit

and for a bachelor's degree. Elective work should be chosen with the intention of making the course of study broad as well as thorough.

The following language studies are required:

English 1a, 1b.

Two years of foreign language including second year French or third year German unless a high grade is obtained in second year German.

Students who have not studied Latin in the high school are required to take a course in elementary Latin.

The following science studies are required.*

Pre-medical Work

	<i>Lectures and Recitations.</i>	<i>Laboratory Hours.</i>	<i>Credits.</i>
Chemistry 1.....	128	192	10
Organic Chemistry 120.....	48	96	4
Physics 1 or 1Sc.....	160	128	10
Biology 1.....	96	256	10
	<hr/> 432	<hr/> 672	<hr/> 34

Study required in the first year of medical course if not presented for matriculation

Embryology.....	16	48	2
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First Year Medical Course

Histology.....	32	112	4
Neurology.....	32	80	4
Gross Anatomy.....	32	352	12
Physiology.....	112	128	9
Physiol. Chem.....	20	140	4
	<hr/> 228	<hr/> 812	<hr/> 33

*It is recognized that similar courses at other institutions may not correspond with the scientific courses given at Wisconsin. This will not prevent full credit being granted for approximately equivalent courses pursued elsewhere.

<i>Second Year Medical Course</i>	<i>Lectures and Recita- tions.</i>	<i>Labora- tory Hours.</i>	<i>Credits.</i>
Pathology.....	80	192	8
Bacteriology and Hygiene.....	64	112	5
Pharmacology and Toxicology.....	64	144	6
Clinical Medicine.....	64	128	6
	272	576	25

Required of candidates for a bachelor's degree: Thesis: 128 laboratory hours (4 units).

Required and elective work may be arranged according to one of the following plans:

1. Six-Year Combined Course (Leading to the B. S. and M. D. Degrees).

If the student has a thorough preparation in the high school, he may take work in the freshman and sophomore years which will enable him to matriculate in the Medical School in his junior year, take the B. S. degree and get a certificate for two years of medical study at the end of the senior year and complete his medical course by two years' further study in any medical school which does not require more than two years of college work for entrance. During the freshman and sophomore years such a student will have to confine himself closely to the work in science and language required for matriculation in the Medical School. The exact choice of studies will depend somewhat upon the high school training and the ability of the student.

The following schedule is suggested:

Freshman Year

English 1a and 1b.....	3 credits per semester
German or French.....	4 credits per semester
Chemistry 1.....	5 credits per semester
Electives.....	3 credits per semester

Sophomore Year

German or French.....	4 credits per semester
Physics 1.....	5 credits per semester
Biology 1.....	5 credits per semester
Organic Chemistry 120.....	4 credits one semester
Embryology 115.....	2 credits second semester

Junior Year

(First Year in the Medical School)

First Semester

Histology 110.....4 credits
 Human Anatomy 121.....8 credits
 Physiol. Chemistry 104 4 credits

Second Semester

Neurology 126.....4 credits
 Human Anatomy 121.....4 credits
 Physiology 105.....9 credits

Senior Year

(Second Year in the Medical School)

First Semester

Pathology 101.....6 credits
 Medical Bacteriology
 102.....5 credits
 Pharmacology 104-5.....4 credits
 Thesis.....2 credits

Second Semester

Pathology.....2 credits
 Toxicology 101-2.....2 credits
 Clinical Medicine 101-
 103.....10 credits
 Thesis.....2 credits

2. Seven-Year Combined Course (Leading to the B. A. and M. D. Degrees)

In this course the student matriculates as a first-year medical student during his senior year in the College of Letters and Science, receives the B. A. degree upon graduation, and takes the second year of the medical course as a graduate student. He can then finish the clinical portion of the medical course by two years' further study, thus making the combined arts and medical course seven years. This course is in many ways preferable to the six-year combined course since it permits a greater freedom of election and a broader course of study. The language and science work should follow somewhat the lines laid down for the freshman and sophomore years in the six-year combined course, but can be more spread out and taken in conjunction with various electives to suit the needs and inclinations of the student.

3. Complete Arts Course Preceding the Medical Course

Students who can afford the time may take the complete arts course before beginning the technical work of the medical course. A bright, well-trained student not infrequently manages to take the B. A. degree in three years. For such a student, the time needed for the two degrees would be the same as that mentioned above. For other students eight years are required, four for the B. A. course and four for the medical course. A far broader training is thus afforded

than in the shorter combined course. Students expecting to finish the clinical part of the medical course at the Johns Hopkins, Cornell, or Western Reserve University must choose either the course of study mentioned above or the seven-year combined course. The work in sciences and foreign language should include all of that mentioned in the first two years of the six-year combined course and may profitably extend beyond this.

Full credit for one year of medical work will not be allowed unless the required preliminary studies and the studies of the first year of the medical course have been completed, and the student has been registered two semesters in the Medical School. Full credit for two years of medical work will be granted only to those who have satisfied the preliminary requirements, who have registered for two college years as medical students, and who have completed all the required studies of the regular curriculum.

Courses for Physicians

The regular courses in the various departments are open to physicians. It is hoped gradually to develop such shorter special courses as may be of greatest direct practical benefit to the physicians of the state in aiding them to keep up with the rapid advance in the medical sciences. Suggestions concerning such courses are desired.

4. Courses Leading to M. P. H. and Dr. P. H.

In conjunction with the State Department of Public Health and with the Department of Health of Milwaukee, a course is offered extending over one year and leading to the degree of Master of Public Health. This course will be open to those who have received a degree in medicine or in medical or sanitary science and desire to fit themselves especially for public health work. It is also planned to offer a short course each year for those already engaged in public health work, but who desire more insight into certain aspects of this work. The following course leading to the degree of Master of Public Health is announced for the year 1917-18. Candidates for the degree of Doctor of Public Health are required to do advanced work and to write a thesis in addition to completing the work covered by this course.

First Semester		Second Semester	
	Credits		Credits
Hygiene 102.....	5	Hygiene 106.....	3
Hygiene 110.....	2	Hygiene 120-121.....	5
Hygiene 115.....	2	Hygiene 125.....	2
Hygiene 125.....	3	Hygiene 126.....	3

Scientific Investigation

It is desired that the facilities of the various laboratories of the Medical School be utilized to the greatest advantage in the investigation of the causes and prevention of disease both in man and animals. The laboratories of the Medical School are freely open to those engaged in such investigations, and, so far as possible, aid will be given in the carrying out of investigations of this character either at the University or elsewhere in the state.

DEPARTMENTS OF INSTRUCTION

Abbreviations in the announcement of courses: Yr., throughout the year; I, given during the first semester; II, given during the second semester; I or II, given each semester; cr., credits, i. e., hours of credit. Unless otherwise stated, the number of credits per semester is given.

For a description of the courses in botany, zoology, chemistry, physics, psychology, climatology, and languages, see departmental announcements in the College of Letters and Science.

ANATOMY

PROFESSORS BARDEEN, W. S. MILLER; INSTRUCTOR SKAVLEM;
ASSISTANTS BURNS, ROANTREE, RYAN, STRASSER, TUPPER.

A group of courses intended to offer a comprehensive view of the gross and microscopic anatomy and the embryology of mammals with especial reference to man is given in this department. In addition, opportunities are offered for advanced work and research in anatomy and for a study of some of the lower animal types of special interest in medicine.

For Graduates and Undergraduates

105. Comparative Mammalian Anatomy. II; 3 cr. Mr Skavlem.

- 110. **Histology and Organology.** I; 4 cr. Dr. Miller.
- 115. **Mammalian Embryology.** I; 2 cr. Dr. Bardeen.
- 120. **Anatomy for Students of Physical Education.** II; 6 cr. Dr. Bardeen.
- 121. **Human Gross Anatomy.** Yr.; 6 cr. Dr. Bardeen.
- 122. **Topographical Anatomy.** II; 3 cr. Frozen sections and special preparations. Dr. Miller.
- 123. **Special Human Anatomy.** Those qualified to do independent work may make some special arrangement for the study of human anatomy.
- 126. **Neurology.** II; 4 cr. Dissection of the human brain, and a study of the microscopic anatomy of the central nervous system and sense organs. Dr. Miller.
- 130. **Advanced Anatomy.**
- 131. **Historical Seminary.** II; 1 cr. Dr. Miller.

For Graduates

- 235. **Investigation under Direction.**
- 240. **Independent Investigation.** Facilities for conducting research in anatomy are offered.

CLINICAL MEDICINE

PROFESSOR EVANS; ASSOCIATE PROFESSORS VAN VALZAH, LORENZ; ASSISTANT PROFESSORS MIDDLETON, MORRIS, RINKER; LECTURERS DEAN, DRAKE, JACKSON, TORMEY; INSTRUCTOR DRANE; ASSISTANT RICHDORF.

- 101. **Clinical Diagnosis.** II; 5 cr. Normal and pathological clinical diagnosis; bedside instruction and medical clinics.
- 102. **Clinical Laboratory Diagnosis.** II; 3 cr. Examination of urine, blood, gastric contents, feces, sputum, and exudates in pathological conditions.
- 103. **Surgery.** II; 1 cr. Lectures and practice, minor surgery and bandaging, surgical clinics.
- 104. **Advanced Clinical Laboratory Work.**
- 105. **Medical Specialties.** II; 1 cr.

HYGIENE

In conjunction with the staff of the State Laboratory of Hygiene, the State Board of Health, and the Board of Health of Milwaukee, courses in Hygiene are offered by members of the Faculty of the Medical School under the general supervision of Dr. Paul F. Clark.

For Undergraduates

1. Health and Disease. I, II; 1 to 3 cr. A course covering the more important aspects of personal and public hygiene, designed especially for students who desire a knowledge of how to promote their own health and that of the community. Dr. Clark and various members of the Faculty of the Medical School.

For Undergraduates and Graduates

102. Bacteriology for Health Officers. I; 5 cr. Given in conjunction with Medical Bacteriology but with special work in the State Laboratory of Hygiene and some special lectures. Dr. Clark, Dr. Stovall.

106. Physiology for Health Officers. II; 3 cr. Given in conjunction with courses 106 and 107 in Medical Physiology but with special reference to the needs of the health officers. Special topics in respiration, dietetics, chemistry of food, air, water, sewage, etc. Dr. Eyster, Dr. Dawson.

110. Special Pathology and Hygiene for Health Officers. I; 3 cr. . Given in conjunction with Pathology 101 and Clinical Medicine 102, but with special work for health officers. Dr. Bunting, Dr. Clark, Dr. Evans, Dr. Stovall.

115. Public Health Administration and Vital Statistics. I; 2 cr. Reading and practical work at the main office of the State Board of Health. Mr. Hutchcroft.

120. Practical Field Work. II. Inspection of slaughter-houses, cow sheds, meats, schools, factories, and workshops; public and private methods of sewage disposal; disinfectants. Under the direction of the State Board of Health.

121. Practical Field Work. Municipal public health work. Under the direction of the Board of Health of the city of Milwaukee.

125. Chemistry of Water Supplies. I; Water analysis in the laboratory. II: Study of water supplies in the field. Mr. Tully.

126. Public Sanitation. II; 3 cr. Dr. Clark.

PATHOLOGY AND MEDICAL BACTERIOLOGY

PROFESSOR BUNTING; ASSOCIATE PROFESSOR CLARK; INSTRUCTORS HARALSON, NEUMANN; ASSISTANTS BOGART, CAMPBELL.

For Undergraduates and Graduates

Courses 101, 102, and 103 are open to students who have successfully completed courses in histology and embryology. Courses 101, 102, and 104 are required of medical students.

101. General and Special Pathology. I; 6 cr. The laboratory exercises devoted mainly to pathological histology and to demonstrations of gross morbid specimens. Dr. Bunting, Dr. Haralson, Mr. Neumann.

102. Medical Bacteriology. I; 5 cr. Considers the bacteria and protozoa which are especially concerned in the production of disease processes. Dr. Clark, Dr. Haralson, Mr. Neumann, Mr. Bogart.

103. Experimental Pathology. II; 4 cr. Dr. Bunting, Dr. Haralson, Mr. Neumann.

106. Oncology. II; 2 cr. A study of tumors. Prerequisite: course 101. Dr. Bunting, Dr. Haralson.

104. Immunity. II; 3 cr. Prerequisite: course 102. Dr. Clark, Mr. Neumann.

107. Sources and Modes of Infection. II; 3 cr. Given in conjunction with Hygiene 126. Dr. Clark.

For Graduates

204. Advanced Pathology. Dr. Bunting.

205. Journal Club. Yr.; 1 cr.

206. Advanced Bacteriology. Dr. Clark.

PHARMACOLOGY AND TOXICOLOGY

PROFESSOR LOEVENHART; INSTRUCTOR MARTIN; ASSISTANT MALONE.

Elementary and advanced courses in pharmacology and toxicology are offered in this department. For the elementary courses a previous training in physiological chemistry and physiology is required. The advanced courses are open to those who have had adequate elementary training.

For Undergraduates and Graduates

101. Toxicology. II; 1 cr. General action of toxic drugs, on diagnosis of poisoning, treatment, and the mode of conducting an autopsy when the tissues are to be subsequently examined chemically in medico-legal cases. Dr. Loevenhart.

102. Toxicology. II; 1 cr. A chemical study of the principal volatile poisons, the alkaloids, the glucosides, and the metallic poisons. Special attention is given to the chief tests for the identification of these poisons. Dr. Loevenhart.

104. Pharmacology. I; 2 cr. Lectures on the chemistry, the pharmacological and toxicological actions, and the therapeutic uses of the chief medicinal drugs. Practice in prescription writing. Dr. Loevenhart.

105. Pharmacology. I; 2 cr. Experimental studies on the action of drugs. Dr. Loevenhart.

108. Advanced Work. Dr. Loevenhart.

112. Independent Investigation.

116. Journal Club. Yr.

PHYSIOLOGY AND PHYSIOLOGICAL CHEMISTRY

PROFESSOR EYSTER; ASSOCIATE PROFESSORS BRADLEY, MEEK; ASSISTANT PROFESSOR DAWSON; ASSISTANTS GIBSON, HODGES, KILEY, TAYLOR.

The following courses are designed especially for students studying Medicine. Course 104 is open only to those who have had a previous training in general and organic chemistry (courses 1 and 120), physics (course 1 or 1Sc) and general biology (course 1). As a preparation for course 105, comparative anatomy, histology, and

neurology (Anatomy 105, 110, and 126), and course 104 are recommended.

For Undergraduates

1. Elements of Physiology. I; 3 cr. Lectures, demonstrations, and recitations. Especially adapted to teachers of elementary physiology and hygiene. Required of sophomores in Home Economics (2 cr.) and open to other students. Students should have had some chemistry. Dr. Meek, Dr. Dawson, Mr. Hodges.

2. Elements of Physiology. I; 1 cr. Laboratory. Required of sophomores in Home Economics; open to others as an elective. Dr. Meek, Dr. Dawson, Mr. Hodges.

3. Animal Physiology. II; 4 cr. Especially designed for students in Agriculture, but open to other students. Dr. Meek.

For Undergraduates and Graduates

104. Physiological Chemistry. I; 4 cr. Lectures, conferences and laboratory. Required of juniors in Medicine and open to others as an elective. Prerequisites: general and organic chemistry, physics, and biology. Dr. Bradley, Mr. Taylor.

114. Physiological Chemistry. I; 3 cr. Lectures, conferences, and laboratory. Required of juniors in Physical Education and open to others as an elective. Prerequisites: general and organic chemistry, physics, and biology. Dr. Bradley, Mr. Taylor.

105. Physiology. II; 9 cr. Lectures, recitations, demonstrations, and laboratory. Required of juniors in Medicine and open to others as an elective. Prerequisites: comparative or human anatomy, histology, neurology, and physiological chemistry. Dr. Eyster, Dr. Meek, Dr. Dawson, Mr. Kerr.

115. Physiology. II; 7 cr. Lectures, recitations, demonstrations, and laboratory. Required of juniors in Physical Education and open to others as an elective. Prerequisites: comparative anatomy and physiological chemistry. Dr. Eyster, Dr. Meek, Dr. Dawson, Mr. Kerr.

116. Physiology of Exercise. I; 3 cr. Lectures and laboratory. Required of seniors in Physical Education and open to others as an elective. Prerequisites: Physiology 105 or 115. Dr. Eyster, Dr. Meek, Dr. Dawson.

117. Advanced Physiological Chemistry and Research. Yr.; credits according to work done. Dr. Bradley.

118. Advanced Physiology and Research. Yr.; credit according to work done. Dr. Eyster, Dr. Meek.

120. Journal Club. Yr.; 1 cr. Reports on recent physiological and biochemical literature. Dr. Eyster.

For Graduates

208. Advanced Laboratory Course in Physiology. Designed for teachers of animal physiology as well as for physicians and students of medicine who desire a wider experience in experimental physiology than can be gained in course 105. Dr. Eyster.

210. Advanced Laboratory Course in Physiological Chemistry. Corresponds to course 208.

GRADUATE SCHOOL

GEORGE C. COMSTOCK, DEAN.

General Statement

The University of Wisconsin is a part of the system of public instruction provided by the state, but is open to all properly qualified students without regard to state lines. It is the aim of the University to offer opportunities for advanced instruction and research to as wide a constituency as possible. No limitations are placed upon a student's freedom in research and in the expression of his conclusions upon subjects which he is prepared to treat, but the University avoids all that is partisan in politics and sectarian in religion, without debarring its members from investigation and activity in any field.

Organization

The work of the Graduate School is under the general direction of the graduate Faculty. The Dean of the Graduate School is charged with general supervision of all graduate students and is the medium of communication between such students and the university administration.

Aims and Methods

The Graduate School aims to serve the needs of men and women of college training who desire a larger and more thorough acquaintance with the scholarship and research of the world than can be obtained in the current undergraduate courses. It seeks to awaken in the minds of capable men and women an appreciation of high scholarship, research, and the advancement of learning, to the end that they may effectively aid, not only in the promulgation of academic instruction, but also in extending the boundaries of knowledge. Although the work of the Graduate School is in large part planned with reference to the needs of those who desire to fit

themselves for the higher positions in the work of education, and who as preparation for this work wish to specialize along definite lines, the opportunities of the school are open to others as well.

In all departments of the Graduate School special emphasis is laid upon bringing the graduate student into contact with the research problems of his field of study. To this end able students share in the investigations of their instructors and are encouraged to acquire the spirit as well as the methods of productive work. Provision has been made by the University for the publication under its auspices of the results of specially meritorious work of this kind, and doctors' theses of more than common merit are occasionally thus published.

Clubs and Societies

To promote interest in problems of scholarship and investigation, and for training in the presentation of results, numerous voluntary clubs and societies have been established by instructors and students in the Graduate School. Among these are:

The Science Club,
The Classical Club,
The Language and Literature Club,
The Historical Conference,
The Romance Language Club,
The German Journal Club,
The Chemical Club,
The Biological Club,
The Mathematical Club,
The Wisconsin Section of the American Chemical Society,
The University of Wisconsin Branch of the American Institute
of Electrical Engineers,
The University of Wisconsin Section of the American Electro-
chemical Society.

The Graduate Club, while sharing in these purposes, is primarily a social organization of graduate students for the promotion of acquaintance and good fellowship among themselves and members of the Faculty.

Fellowships and Scholarships*

University Fellowships

For the purpose of promoting higher scholarship and research the Regents of the University have established twenty-two University Fellowships of the annual value of \$400 each. These are allotted to the several departments of instruction as follows:

To Political Economy, two; to History, two; to Geology, and the biological sciences, two; to Engineering, two; to Agriculture, two; to the following departments and groups of departments one each, viz.: Botany, Political Science, Sociology, Latin, Greek, German, Romance Languages, Chemistry, Physics, Mathematics and Astronomy, Philosophy, Education.

To the above should be added certain endowed fellowships specially described upon following pages.

The following are regulations respecting fellowships and scholarships:

1. Any fellowship to which the present regulations apply may be held by any graduate of a college of recognized standing or by anyone whose education is equivalent to that represented by a college degree. Those about to take such a degree are eligible candidates, the regulations applying to the time of entrance upon the duties of the fellowship. Men and women are equally eligible. Preference in appointment will usually be shown to candidates who possess a competent reading knowledge of French and German.

2. Fellowships will be granted upon application only, which should be made upon a special blank form furnished by the Registrar of the University; such application, with accompanying evidence of merit, attainment, and ability, to be in the hands of the Registrar before March 1st of the collegiate year preceding that during which the fellowship is to be held.

3. All fellowships will be filled each year. Fellows may be reappointed for one additional year only.

4. Application must be accompanied by evidence of scholarship, ability, and general worthiness; such as theses (whether prepared for this or other purposes), published writings, testimonials from instructors, outline of educational course pursued, special distinctions gained and the like. Applications for reappointment should contain a full account of the work of the preceding year. Applications to receive attention must contain a definite statement of the special studies which the applicant intends to pursue.

5. Each fellow shall pursue his studies under the direction of an assigned professor or professors. Assignment of university services to the fellow shall be made by the President in consultation with the head of the department to which the fellow has been assigned, and the work assigned may be equivalent to one hour of teaching daily. It is stipulated that the holder

*With exception of honorary fellows, all fellows and university scholars are required to pay the incidental fee.

of the Sociology fellowship shall do work at the University Settlement in Milwaukee.

6. Vacancies in fellowships, due to resignation or other cause, may be filled as they occur, at the option of the Faculty.

Honorary Fellowships

The Regents have established honorary fellowships, equal in number to the University Fellowships, and filled in a similar way. These are restricted, however, to persons who have already held academic honors, such as fellowships or teaching or research appointments. No compensation is attached to these positions except the remission of university fees, and no teaching service is required; but to be eligible to an honorary fellowship one must be a graduate of at least one year's standing.

Teaching Fellowships

For the promotion of efficiency in teaching, the Regents of the University have established in addition to the University Fellowships above described eight teaching fellowships, which are to be filled annually upon nomination made by the Committee on the Training of Teachers. These fellowships are open only to graduates of the University of Wisconsin who have had no experience in teaching. The holders of these fellowships devote one-half year to special graduate study within the University and one-half year to apprentice teaching, under supervision in a "cooperating high school." For the latter service a payment of \$135 is made in addition to the stipend of \$275 attached to the fellowship. For further details concerning these teaching fellowships application may be made to the Director of the Course for the Training of Teachers.

Working Fellowships

An arrangement has been made whereby a limited number of graduate students may be appointed to positions under the state government of Wisconsin, known as Working Fellowships in Transportation, Taxation, Insurance, and Labor and bearing a salary of \$600 for eleven months' service. Appointment to these positions is made upon recommendation of the Civil Service Commission and the department expects the incumbent to devote one-half of his time to graduate study within the University and one-half to the service of the state: viz., the Tax Commission, the Railroad Commission, the Industrial Commission, and the Department of

Insurance. It is expected that the service rendered to these departments will be, in part at least, of the nature of investigation furnishing a valuable supplement to academic work in the Department of Political Economy. For further information application may be made to the Civil Service Commission or to the University Registrar.

Albert Markham Memorial Graduate Traveling Fellowship

In accordance with the terms of a bequest from the estate of the late Albert Markham, founder and principal of Markham Academy, Milwaukee, the Albert Markham Memorial Graduate Traveling Fellowship is offered annually in the departments of language and literature of the University of Wisconsin, to holders of a Ph. D. degree and is administered by a committee representing those departments. The income for 1915-16 is \$800.

The major work of the appointee must lie in one of the departments of language and literature. He is expected to devote the year to foreign travel and study in foreign universities, but by special permission he may study at some other American university.

Mary M. Adams Graduate Fellowship in English

By will the late Charles Kendall Adams, formerly president of the University of Wisconsin, conveyed the larger part of his estate to the Regents of the University for the gradual establishment of fellowships in Modern History, Greek, and in the English Language and Literature. The first of these fellowships, the Mary M. Adams Graduate Fellowship in the English Language and Literature became available in the academic year 1906-07, since which time the annual amount paid to the incumbent has ranged from \$500 to \$550.

Charles Kendall Adams Graduate Fellowship in Greek

The second of the graduate fellowships established by the will of the late President Adams became available in the academic year 1913-14. It is called the Charles Kendall Adams Graduate Fellowship in Greek, and its value to the incumbent will be approximately \$550.

Graduate Scholarships

The Regents of the University maintain twenty-one graduate scholarships of the value of \$225 each. Two of these are designated for Economics, one for Political Science, one for European History, one for American History, two for Agriculture, and three for Engineering. Appointments to these scholarships are in general made in the same manner as appointments to fellowships, but by special provision authority is conferred upon the faculties of Beloit College, of Carroll College, of Lawrence College, of Milton College, of Milwaukee-Downer College, and of Ripon College to nominate annually to the Faculty of the University of Wisconsin one member of their respective senior classes as a suitable candidate for a university scholarship. Such candidates, when duly appointed by the Regents of the University, shall be in all respects upon the same footing as other university scholars.

Hollister Fellowship in Pharmacy

Mr. and Mrs. Albert H. Hollister, late of Madison, by separate wills conveyed to the Regents of the University legacies, now amounting to \$10,328, for the establishment and maintenance of a fellowship in Pharmacy. The annual income of this sum is allotted to a graduate student appointed upon recommendation of the Department of Pharmacy.

The Milwaukee Graduate Fellowships and Scholarships in German

Through the generosity of a number of citizens of Milwaukee interested in the promotion of advanced studies in German in the University, there have been established seven graduate fellowships in German of the annual value of \$400 each and four graduate scholarships of the annual value of \$200 each. These fellowships and scholarships will be available for a period of five years beginning with the academic year 1917-1918, except in the case of the Joseph Schneider Fellowship which has been established for a period of three years.

The following are the fellowships and scholarships thus established:

The Albert F. Gallun Graduate Fellowship in German.

The Gustav Pabst Graduate Fellowship in German.

The Charles F. Pfister Graduate Fellowship in German.

The Joseph Schneider Graduate Fellowship in German.

The Charlotte Trostel Graduate Fellowship in German, established by Mr. Albert O. Trostel in memory of his mother.

The Alfred Uhlen Graduate Fellowship in German.

The Fred Vogel, Jr. Graduate Fellowship in German.

The Albert C. Eiser Graduate Scholarship in German.

The Henry Schoellkopf Graduate Scholarship in German, established by Mrs. Emilie Nunnemacher and Mrs. Wm. H. Schuchardt.

The two Albert Trostel Graduate Scholarships in German, established by Mr. Albert O. Trostel in memory of his father.

Henry Gund Scholarship

Through the generosity of Mr. Henry Gund, of La Crosse, there has been established the Henry Gund Scholarship in German Literature of the annual value of approximately \$250.

Research Assistantships in the Forest Products Laboratory

In accordance with the regulations of the United States Civil Service Commission, a limited number of students who show unusual ability in research may be appointed as student research assistants by the Forest Service and Bureau of Plant Industry. The entire time of the student is given to lecture or class work in the University and to research in the Forest Products Laboratory. The salary varies from \$100 to \$300 a year and laboratory fees will be remitted for work in the Forest Products Laboratory. The number of students thus appointed will depend largely upon the funds available, ten men holding such positions at present in the divisions of Chemistry and Pathology of Forest Products. Applications for these assistantships, accompanied by testimonials, should be sent to Director H. F. Weiss, Forest Products Laboratory, Madison, Wis., before March 1 of the collegiate year preceding that during which the assistantship is to be held.

Admission to the Graduate School

Graduates from four-year courses of liberal study in any approved university or college will be admitted to the Graduate School without examination, but will not be considered as candidates for a higher degree until announcement of such candidacy has been made to the Dean of the Graduate School. Undergraduates of the University of Wisconsin who have completed all requirements for the bac-

calaureate degree may be admitted to the Graduate School before the degree is actually conferred. Each applicant for admission to the Graduate School should, in person, present his college diploma to the University Registrar, who will determine, provisionally, his eligibility to admission, and will furnish a statement of fees to be paid at the Bursar's office. This statement serves also as a certificate of enrollment in the Graduate School and should be presented promptly to the Dean, at Room 157, University Hall, who will issue to the student an election card for presentation to the several instructors under whom he desires to study. Students already enrolled in the Graduate School should obtain from the Dean an election card at or before the beginning of each semester.

Graduate students are invited to confer freely with the Dean of the Graduate School in all matters concerning their relations to the University.

Second Degrees

The University of Wisconsin confers the following second degrees: Master of Arts, Master of Science, Master of Philosophy, Civil Engineer, Mechanical Engineer, Electrical Engineer, Chemical Engineer, Engineer of Mines.

These degrees are conferred in accordance with the conditions set forth below, upon graduates of the University of Wisconsin and upon graduates of other institutions of learning whose training has been substantially equivalent to that represented by the baccalaureate degree of the University of Wisconsin. The University will determine this substantial equivalence of training by such methods as seem best adapted to each case, and may impose upon any candidate such additional requirements as seem needful and just.

The degree, Master of Arts, is conferred upon candidates whose undergraduate work corresponds to that now leading to the degree, Bachelor of Arts, as conferred by the University of Wisconsin. The degree presupposes training in foreign language substantially equivalent to that required in the University of Wisconsin for the Bachelor of Arts degree. The University reserves the right to test by its own methods the adequacy of such training.

The degree, Master of Science, connotes a considerable attainment in mathematical; physical or biological science and will be conferred only upon candidates adequately trained in this field. The undergraduate preparation should be equivalent to that leading in the University of Wisconsin to the B. S. degree or to the B. A.

or Ph. B. degree with major in Science. The degree, Master of Philosophy, is conferred only upon those candidates who have received from the University of Wisconsin the degree of Bachelor of Philosophy, but such candidates may receive the M. A. degree in lieu of Ph. M. by absolving, as a supplement to their graduate work, all requirements for the B. A. degree not satisfied at the time of taking their Ph. B.

Candidacy for the above degrees is normally based upon resident study at the University, but provision is made whereby a measure of credit may be extended to work done *in absentia*. In no case, however, will a master's degree be conferred in course without one semester of resident graduate study at the University of Wisconsin and the equivalent of another semester's work done, under approved conditions, elsewhere.

The following regulations for the attainment of second degrees apply to all candidates in residence.

1. During a period of at least one academic year the candidate must pursue a course of graduate study characterized by definiteness of purpose and approved by the University as appropriate to that purpose and suitable in amount. Such a course includes normally for each semester assigned graduate work carrying from nine to twelve credits and at least one-half of this work must lie in a single department. The undergraduate preparation of the candidate must be sufficient to satisfy the instructor that the advanced work may be profitably undertaken. Undergraduate courses of suitable character may be elected in addition to the normal amount of graduate work, provided that the recommendation of the professor in charge of the student's major and the approval of the Dean of the Graduate School be obtained in advance.

2. Students who during their candidacy for the master's degree are engaged in teaching, or other remunerative employment, will be required to devote to their studies such period longer than one year, as may be designated by the Graduate Committee.

3. For students seeking to specialize in a definite line of study the preparation of a thesis may be required and subject to the approval of the professor in charge, such thesis work may be elected by others. A typewritten copy of the completed thesis bearing the approval of the professor under whom it is taken must be filed with the Librarian of the University.

4. The candidate must sustain an oral examination upon the graduate work offered in support of his candidacy. The time and place of this examination will be determined and the examining committee appointed by the Dean of the Graduate School.

Second Degrees in Engineering

The degrees, Civil Engineer, Mechanical Engineer, Electrical Engineer, Chemical Engineer, and Engineer of Mines will be conferred:

(a) Upon graduates of approved institutions who have completed suitable undergraduate courses and who successfully pursue not less than one year of advanced engineering study at the University of Wisconsin, in accordance with the rules above set forth for the attainment of second degrees.

(b) Upon graduates of the College of Engineering of the University of Wisconsin who have spent three years in professional work, at least one of which must have been in a position of responsibility, and who present a satisfactory thesis.

Second Degree in Medicine

The degree, Master of Public Health, will be conferred upon graduates of approved medical colleges who satisfactorily complete one year of graduate work in sciences related to public health. For a detailed statement regarding this degree application may be made to the Registrar.

Second Degrees for Students in Professional Colleges

Graduates of approved institutions who are regularly enrolled in the professional colleges of this University may supplement their professional studies by work taken in the Graduate School. Upon the completion of an approved course of study they will be admitted to examination for the master's degree, to be conferred at the time of their graduation from the professional college. The course of study thus prescribed for the attainment of the master's degree may be expected, normally, to require one-third of the student's time for a period of two years.

Candidacy for the Master's Degree Partly in Absentia

By consent of the departments concerned, any person eligible to candidacy for a second degree, who has done satisfactory graduate work during one summer session of the University, may be admitted to candidacy for a master's degree upon the following terms:

1. The candidate must conform to all of the above regulations for candidates for the master's degree with exception of the requirement of residence at the University.

2. During a period of two consecutive years, while not in residence at the University, the candidate must pursue a course of advanced study previously arranged and approved by some department of the University and attested by a signed statement filed with the Dean of the Graduate School. See Rule 3 below. This work is designated his major study, and during two or more summer sessions, in addition to the one above named, he must pursue, at the University, work in continuation of, or collateral to, this major; for example, laboratory or seminary work in the department in which the major is taken. The *absentia* work is expected to equal in amount that normally accomplished in three summer sessions. But, experience having shown that in many cases this amount of work cannot be done within two years by teachers and other persons charged with onerous duties, the University reserves the right to impose in such cases four or more summer sessions as the minimum period of residence, with corresponding diminution of the work *in absentia*.

3. As some departments of the University do not concede the privilege of candidacy *in absentia*, the applicant for this privilege must arrange in advance with the department concerned for its approval of the proposed work and must show that he has access to adequate facilities for its prosecution. A form showing that such arrangement has been made must be completed and filed with the Dean of the Graduate School at or before the close of the first summer session of candidacy. By consent of the department and of the Dean of the Graduate School, graduates of the University of Wisconsin may enter upon the *absentia* work above prescribed, without prior residence in the Graduate School. For all other candidates residence at the University of Wisconsin for one summer session, or its equivalent, will be required as a prerequisite to approval of candidacy by this method. Continuous supervision by the University cannot, in general, be given to work done *in absentia*, and its amount and character will therefore be tested at the opening of each summer session by examination upon the ground covered *in absentia* during the preceding year.

Doctor of Philosophy

The degree of Doctor of Philosophy is not conferred solely as the result of faithful study extending over any prescribed period; special attainments are required in all candidacy for this degree, particularly the power of independent investigation as shown by

the production of a thesis embodying original research or creative scholarship, presented with a fair degree of literary skill. Candidacy for the degree is based upon resident graduate study normally extending over a period of not less than three academic years, at least one of which, usually the last, must be spent at this University. Candidates who are engaged in teaching or other remunerative employment will be required to devote to their candidacy such additional period in excess of three years as may be designated by the Graduate Committee.

The attention of graduate students is called to the following regulations respecting candidacy for the doctor's degree and they will be presumed cognizant of them.

1. Major Study.—Candidates for this degree are required to select a major study, which may be coextensive with the work of a department or with one of the subjects under which certain departmental announcements of courses are classified, or which may be constructed from two closely related subjects. Only in exceptional cases and with the prior approval of the Dean of the Graduate School will a major be allowed to extend beyond a single department. The courses composing the major may be divided among several instructors, one of whom, designated as In charge of the Major Study, will act as the student's adviser in the selection and arrangement of courses constituting the major and also the minor studies defined below. The major professor will have immediate supervision of the thesis unless the Graduate Committee, upon recommendation of the department, shall otherwise direct.

2. Minor Studies.—Supplementary to his major work, the candidate must pursue one and may pursue two minor studies, which shall aggregate from one-fourth to one-third of the time spent upon his graduate studies and which shall be outside the department of his major subject. Such minors and the amount of work to be devoted to them shall be stated to the Graduate Committee for its approval at the time of admission to candidacy for the degree. See Section 3.

3. Admission to Candidacy.—Preferably nine months and at least seven months prior to the oral examination provided in Section 4, the candidate shall file with the Dean of the Graduate School his formal application to be admitted to candidacy for the doctor's degree. This application shall include the following statements:

(a) The title of his proposed thesis (subject to future verbal amendment) and the major professor's approval of such title.

(b) Certificates from the Departments of French and German of the University of Wisconsin that the candidate possesses a reading knowledge of those languages adequate for use in research in his major subject.

(c) Departmental recommendation of candidacy based upon examination, or such other substantial test as the departments may elect. The nature of such test shall be stated in the recommendation.

(d) The scope of the proposed minors, as provided in Sec. 2, and the approval of a professor who assumes charge of each such minor.

This application shall be submitted to the Graduate Committee, which may reject it for cause, or may approve it and admit to candidacy. With reference to time requirements imposed by the University, the Graduate Committee may specify the earliest permissible date for the final oral examination provided in Section 4.

4. **Oral Examinations.**—Every candidate for the doctor's degree is subject to oral examination upon the general field of his major and minor studies, but such examination upon a second minor subject may be waived upon recommendation of the instructor in charge, accompanied by a certificate that the candidate has passed a special written examination adequately covering the field of such subject. The Dean of the Graduate School will appoint for each candidate an examining committee, usually composed of five persons, with the major professor as chairman, and will designate a time and place for the examination. The candidate's completed thesis shall be presented to this committee or, in lieu thereof, the major professor shall state to the committee its purpose and scope and shall certify to the committee that the work upon the thesis is substantially completed. This examination shall be open to all members of the Graduate Faculty.

5. **Thesis.**—At any time after admission to candidacy, the candidate may submit to the Dean of the Graduate School for approval of its mechanical form and execution, a typewritten copy of his completed thesis, provided with a title-page in form prescribed by the University and furnished by it, in blank, upon request. At any time thereafter, upon request of the major professor, the Dean shall constitute a committee of three persons, including the major professor, who shall report upon the substantial merit of the thesis. Their report, if favorable, shall be endorsed upon the thesis for publication. When so endorsed the thesis shall be filed in the University Library and shall be withdrawn therefrom only upon written authorization of the Dean of the Graduate School. In case of

divided opinion among the examiners, the case shall be decided by the Graduate Committee with right of appeal to the Faculty.

6. **Abstract.**—At any time after approval of the thesis, the candidate may file with the Dean of the Graduate School either an abstract of the thesis, or a selected part thereof, certified by the major professor to be adequate for publication in lieu of the complete thesis.

7. **Security for Publication.**—After filing such abstract or selected part, the candidate shall place with the University Bursar the sum of fifty dollars as a guaranty of prompt publication of his thesis. The sum so placed shall be held in trust by the Bursar for a period of not less than one year and shall be refunded to the candidate, if during such period he shall deliver to the University Librarian the printed copies of his thesis prescribed in Section 8. At the expiration of the period thus prescribed, if the printed copies have not been so delivered, the Dean of the Graduate School may declare such fifty dollars to be forfeited to the fund for the publication of thesis abstracts and it shall be transferred to that fund by the Bursar.

8. The successful candidate is urged to put his thesis into print as promptly as possible and to deposit one hundred copies of the same in the University Library. In the case of doctors' theses published in (1) such scholarly periodicals or society or university publications as shall be approved by the Dean of the Graduate School, or (2) in bound volumes issued and sold by well-known publishing houses approved by the Dean, the candidate may deposit in the University Library six copies of the thesis so published in lieu of the one hundred copies above described. By approval of the major professor and the Dean of the Graduate School, publication and filing of an approved part of the thesis may be accepted in satisfaction of this requirement.

9. Recommendation to the Graduate Faculty that the doctor's degree be conferred upon the candidate will be made (a) upon absolving the requirements above set forth under Sections 3, 4, 5, and 8, or (b) upon absolving the requirements of Sections 3, 4, 5, 6, and making the deposit named under Section 7.

Degree of Doctor of Public Health

The degree of Doctor of Public Health (Dr. P. H.) is open to holders of the degree of Doctor of Medicine from medical schools

recognized as maintaining satisfactory standards. Candidates for the degree of Dr. P. H. must spend at least two years subsequent to the regular Medical Course in the study of sciences related to hygiene and public health. The last of these years must be spent at the University of Wisconsin and must be devoted chiefly to work upon a special subject leading to a thesis containing some original research acceptable to the Executive Committee of the Medical School. The general requirements for the degree are essentially similar to those specified for the degree of Doctor of Philosophy with the following exceptions:

1. The language requirements are those maintained for the B. S. degree (Medical Science Course).
2. The time requirements are as outlined above.
3. The preliminary examination of the candidate is to be conducted by and his thesis approved by the Executive Committee of the Medical School.

Fees and Expenses

See p. 66 and the Index.

Graduate Circular

The special announcement of the Graduate School giving detailed information concerning the School, may be obtained upon application to the Registrar of the University.

UNIVERSITY EXTENSION DIVISION

(Extra-mural College)

LOUIS E. REBER, DEAN.

Of the three main functions of a commonwealth university—(1) resident instruction, (2) research, and (3) the dissemination of the useful and assimilable knowledge which has been accumulated through productive scholarship, to all classes of citizens and in forms adapted to their requirements,—the third is fulfilled in an organized way by the Extension Division.

This Division constitutes the Extra-mural College of the University, and is therefore one of the seven coordinate colleges of the University with a dean and a faculty of its own.

Organization

The work of the Extension Division is divided into four departments as follows:

- I. Correspondence-Study
- II. Instruction by Lectures
- III. Debating and Public Discussion
- IV. General Information and Welfare

Field Organization

For convenience and efficiency in administration, the state is divided into districts. In a central point of each is established an office or district headquarters, over which a district representative presides. Associated with him are district and traveling instructors, who give personal assistance and instruction to students who have need of such help, or conduct class groups for those pursuing correspondence-study work where that may be desirable.

Field organizers make known the instruction and other opportunities which are made available through the Extension Division, and organize the details of the work in the field.

District Organizations

First District Office.....	Milwaukee
Second District Office.....	Oshkosh
Third District Office.....	La Crosse
Fourth District Office.....	Superior
Fifth District Office.....	Wausau
Sixth District Office.....	Eau Claire

Object

The object of this University in carrying on extension work is to provide the highest type of education feasible for the citizens of the commonwealth who are unable to attend established educational institutions and to give every one in the state the opportunity to obtain the highest education possible at the smallest practical expense,—to bring the University and the home into close relationship.

CORRESPONDENCE-STUDY DEPARTMENT

WILLIAM H. LIGHTY, SECRETARY AND PROFESSOR.

Purpose

For the needs of those who are unable to adjust themselves to the formal system of education, special forms of consecutive home study courses have been developed by the Correspondence-Study Department. This department offers individual instruction adapted to the special needs of students who cannot come into residence study at the University. The instruction given may be undertaken in the leisure hours of each student at his own home.

Plan and Scope

The University of Wisconsin provides, through the Correspondence-Study Department, nonresident or home study instruction as follows:

I. Certain regular university studies which may, under approved conditions, be taken for credit toward a degree.

II. Advanced courses designed to help persons—graduates and others—in professional or practical life to keep in touch with the advancement in science and other fields of knowledge.

III. High school and preparatory studies for those for whom the conventional institutions are not available or practicable.

IV. Elementary and grammar school studies for those who require such instruction for practical purposes.

V. Vocational courses prepared with reference to the needs and requirements of given occupations.

VI. Guided study outlines for program material to aid various organizations in their club work.

General Benefits

Persons who are benefited by correspondence-study may be divided into two main classes: (1) those who have the taste, ability, and inclination to continue their education whether general or vocational; (2) wage-earners who cannot leave their employment in order to acquire training directed towards greater proficiency and skill.

The first class may be roughly divided into: (1) those who wish to keep abreast of the advances in knowledge in their profession or business, or who wish to study purely for purposes of general culture; (2) those who wish to acquire units of credit towards a university degree; and (3) those who require preparation for entrance to the University.

The second class includes: (1) those whom the necessity of earning a livelihood has taken from school before acquiring an elementary education; (2) those who have had the benefits of more or less liberal educational opportunities, but have received no training especially adapted to fit them for their chosen vocations; and (3) those who desire to change vocations and prepare themselves for employment more nearly adapted to their tastes and abilities.

This system of instruction is designed for persons carrying on their own education. It is open to nonresidents as well as to residents of the state of Wisconsin.

Industrial Education

This department cooperates with employers and local school authorities in the organization of local instruction in vocational and continuation studies. Where a number of persons have the same

interests and needs, classes are formed under the instruction of teachers familiar with the local industrial conditions.

The instructor engaged in this work gives his entire time to it. He is as familiar with the employe's labor as he is with the lesson text, and, therefore, can help the men to make practical applications of lesson to work.

Method and System

PROCEDURE. The student who wishes to undertake correspondence-study should first select such course or courses as he may desire to take and send for an application blank. He should fill out the blank with information called for and return it, with the required fee, to the office of the Extension Division. The necessary textbooks, outfit, etc., may also be purchased through the Extension Division if the student so desires. Students are encouraged to register for but one course at a time. No more than two courses may be registered for at one time unless the student can give evidence that he has several hours a day to devote to study.

THE INSTRUCTION. Upon receipt of the application and fee, the first two lessons will be sent with instructions for study, methods of preparation, and directions for returning lesson sheets and reports. Each lesson will be returned to the student with such corrections, explanations, and suggestions as may be needed. Lists of books, assignments for reading, and all necessary assistance will be furnished throughout the course, so that no student will be left without adequate aid and guidance. Questions on the subject in hand are at all times encouraged.

BY WHOM PREPARED. These courses are prepared by the members of the University Faculty, and each represents a definite amount of work equivalent to similar work done in residence at the University, or in standardized schools.

THE UNIT COURSE. The unit course is divided, where practicable, into forty weekly assignments. Such a course represents at least an amount of work equal to that done in residence at the University in a full five recitation-hour study a week for one semester, or half year. It is assumed that this work may be done by the average student in forty weeks on a minimum leisure for study of one hour a day, six days in the week. It is, however, the student's privilege to pursue his studies as rapidly as he is able.

THE LESSON. The unit course is divided into assignments. In some courses this may call for but a single report, but in others the

assignment is divided into two or more lessons. In all cases the assignment represents an average week's work, and not an evening's work as at school.

PERMANENCE. The department endeavors to make its work thorough and permanent and the various courses have been arranged in coordination with the regular residence work, the short courses, and the summer session.

EXAMINATIONS. Examinations are optional with the student, but are required where credits or certificates are sought. These examinations must be taken at the University, or under conditions approved by the University.

REGULATIONS. 1. Students may begin correspondence courses at any time during the year.

2. For admission to the Correspondence-Study Department no preliminary examination is required. The student is required to fill out an application blank, giving such information as may be helpful in adapting the instruction to the personal needs of each student.

3. Students who undertake correspondence-study work for university credit must state this fact in advance and comply with all the requirements of the University.

4. For the benefit of the department it is desired that the applicant state fully the purpose he has in view in taking the work, and also in detail such educational advantages, training, or experience as he may have had. The department endeavors to meet the needs of the individual student by advice and suggestion, as well as by formal instruction, but whenever it finds that the course elected is not for the best interests of the student, it reserves the right to reject the application, or to advise a change to another course.

5. Correspondence students enrolled in a course (or courses) comprising twenty assignments or less, not involving credit towards a university degree, are allowed twelve months from the date of registration to complete the work. For longer courses a proportionately longer time is allowed. Correspondence students who are candidates for credit towards a degree are expected to complete one course of forty assignments or less within twelve months, two courses within fifteen months, three courses within eighteen months, from the date of registration.

6. No fee is refunded because of a student's inability to enter upon or pursue a course for which he has once registered. If an application for instruction is rejected the fee is returned.

7. The fee for a full unit course of forty assignments is only twenty dollars. When the student registers for more than one unit

course he receives a discount of twenty-five per cent upon the amount of the fees in excess of twenty dollars. These fees are deliberately put upon the lowest operating basis.

Laboratory Work

Provision is made in connection with many correspondence courses, both in the advanced grade and in the vocational studies, by which laboratory practice forms a part of the instruction. In some courses laboratory outfits are sent to the student from the University to be set up in his own home. In other cases special arrangements are made for short periods of laboratory practice at Madison. In some studies local branch laboratories are established where local students may receive special instruction as the correspondence course proceeds.

University Credit

1. Persons who have had the required preparation for admission to the University, will, upon satisfactory completion of a correspondence-study course designed for credit, be awarded a certificate of credit in the University.

2. The maximum credit granted for work done by correspondence-study, however, may not exceed one-half the unit hours required for graduation.

3. At the completion of each correspondence-study course for university credit, the student shall pass an examination held under the direction of the instructor giving such course, or by some one designated by the University for that purpose.

4. Work taken for credit may not be done by any student while in attendance at any institution of learning.

5. In special cases credit may be allowed for correspondence-study courses of preparatory grade to satisfy partial entrance requirements to the University.

6. Credit to an amount not exceeding one-fourth of the unit hours required for graduation may be given at the University of Wisconsin to students of such other correspondence schools or departments as may be designated by the University of Wisconsin. It is, however, required that such credits shall be subject to the same provisions as are made in the University of Wisconsin, and subject to the action of the accredited schools committee, or the advanced standing committee, as the case may require.

7. Credit records of correspondence-study work are filed in the University Extension office until the student has satisfactorily completed one year of study in residence. When all the requirements are satisfied, the correspondence-study records may be transferred to the Registrar's office and applied toward graduation.

8. All courses offered by the Correspondence-Study Department, whether taken for university credit or not, are on a uniform basis in reference to the amount of work covered. Courses which are satisfactorily completed have, therefore, a definite value, and all students who successfully complete such courses will be awarded certificates of the grade in which the work is taken.

Correspondence-Study Courses

Courses marked with an asterisk (*) involve university credit. Full information on any of the correspondence-study* courses is supplied on request.

Astronomy

INSTRUCTOR EATON.

1. Popular Astronomy.

Botany

PROFESSOR ALLEN; ASSOCIATE PROFESSOR OVERTON; ASSISTANT PROFESSORS DENNISTON, GILBERT.

1. Description and Classification of Flowering Plants*; 11. General Botany*; 12. Morphology of Seed Plants*; 2. General Morphology of Algae*; 3. General Morphology of Fungi*; 5. Plant Histology*; 4. Morphology of Mosses and Ferns*; 7. Drug and Food Products*; 8. Trees and Shrubs*; 21. Elementary Botany.

Business Administration

PROFESSORS GILMAN, SCOTT; ASSOCIATE PROFESSOR ELWELL; INSTRUCTORS CLARK, IRWIN, KUECHENMEISTER, LANGMAS, LEE, MARSH, NICHOLS, READ.

Business Organization and Management

142-155. Complete Course, Business Organization and Management; 142-144. General Organization of Business; 145-150. Types of Business Organization; 151-152. Industrial Management; 153-155. Marketing Methods.

Bookkeeping and Accounting

128. Bookkeeping; 129. Accounting Principles; 135. Advanced Accounting Problems; 136. Cost Accounting; 130A. Bookkeeping and Cost Finding for Printers.

Business Law

115. Contracts; 118. Sales; 122. Commercial Paper; 124. Private Corporations; 198. Insurance.

Retailing

159. Retail Selling and Store Management; 159A. Retail Selling; 191A. Retail Advertising.

Other Subjects

102. Commercial Correspondence; 114. Commercial and Industrial Geography.*

Chemistry

PROFESSOR KAHLENBERG; ASSISTANT PROFESSOR KRAUSKOPF.

1. Elementary Chemistry*; 2. Qualitative Analysis.*

Education

PROFESSORS HENMON, O'SHEA; ASSISTANT PROFESSORS HENDERSON, SEYBOLT, STARCH; INSTRUCTOR HOYT.

1. Principles of Teaching*; 2. The Development of Childhood and Youth*; 3. Educational Psychology*; 4. The Child and Elementary Education; 5. Child Nature and Training; 6. History of Modern Education*; 51. Social Development and Education*; 61. Advanced Educational Psychology*; 71. History of American Education*; 81. Administration and Supervision of Education*; 91. Conferences on Teaching Problems*; 20. Course for Industrial Teachers.

Electrical Engineering

ASSOCIATE PROFESSOR JANSKY; ASSISTANT PROFESSOR WINNING; INSTRUCTORS HOBBS, JACKLIN, KRANZ, MITCHELL, NESBITT, WINN.

301. Elementary Electrical Mathematics; 310. Elementary Magnetism and Electricity; 311. Direct Currents and Direct Current Machinery; 312. Theory of Alternating Currents; 313. Alternat-

ing Current Machinery; 314. Electric Lamps and Illumination; 316. Central Electric Stations; 317. Electric Power Transmission; 318. Telephones and Telephone Apparatus; 319. Commercial Electrical Measuring Instruments; 319A. Watt-hour Meters; 320. Testing of Electrical Machinery; 322. Electric Batteries; 322S. Storage batteries; 323. Electrical Central Station Distribution Systems; 324. Electric Wiring; 330. Electrical Engineering Mathematics.

English

ASSISTANT PROFESSORS BEATTY, GARDNER, PITMAN; INSTRUCTORS BASCOM, BURD, NICHOLS, SHAFER.

1. Elementary English; 61. English Grammar; 64. Practical English Review; 2. Intermediate English Composition; 3. High School English Classics; 62. Advanced English Grammar; 8. Technical English; 63. Grammar Review and Elementary Composition; 102. Commercial Correspondence; 79. Review of English Composition; 81. Review of American Literature; 91. Review of English Literature; 5 and 6. English Composition*; 7. Advanced Composition*; 113B. Ancient Classical Drama in English*; 16. The Short Story*; 51 and 52. General Survey of English Literature*; 31. General Survey of American Poetry*; 17A and 17B. Shakspeare*; 18. The Poetry of Tennyson*; 19. The Poetry of Browning*; 25. The English Novel in the Nineteenth Century*; 35A and 35B. Modern Drama*; 4. The Teaching of English*; 214S. The Ballad*; 215S. Byron and His Contemporaries*; 216S. Shakspeare*.

French

PROFESSOR SMITH; ASSISTANT PROFESSOR REED; INSTRUCTOR GALLAND; ASSISTANT DIXON.

1 and 2. Elementary French*; 3 and 4. Intermediate French*; 5. Technical French*; 6. Elementary French Prose Composition*; 7. Advanced French Composition*; 8. Modern French Dramatists*; 9. Modern French Novelists*; 10. General Survey of French Literature.*

Geology and Mineralogy

PROFESSORS LEITH, WHITBECK, WINCHELL; ASSOCIATE PROFESSOR MARTIN; ASSISTANT PROFESSORS BEAN, STEIDTMANN, WILLIAMS.

1. Mineralogy*; 2. Economic Geology*; 3. Physical Geography*; 4. Elementary Geology*; 6. Laboratory Work in Optical Mineralogy*; 7. Paleontology.*

German

PROFESSOR HOHLFELD; ASSISTANT PROFESSOR A. ERNST; ASSISTANT HENNING.

1 and 2. Elementary German*; 3 and 4. Intermediate German*; 6. Scientific German*; 7. Commercial German*; 8. Critical German Prose*; 9. Grammar Review*; 12. German Composition*; 19. Elementary Teachers Course; 20. Advanced Teachers Course*; 25. Modern German Dramatists*; 26. Modern German Novelists*; 22. Schiller*; 21. Goethe*; 29. Goethe's Faust*; 30. History of German Literature*; 31. History of the German Language*. Studies in Lessing, Heine, Uhland, and Modern German Poetry are also available. Courses in Gothic, Old High German, Middle High German, and Old Saxon will also be arranged.

Greek

PROFESSOR SMITH, ASSISTANT PROFESSOR PITMAN.

1. Elementary Greek*; 2 and 2A. Xenophon's Anabasis*; 3. Homer's Iliad I-III or Odyssey VI-VIII*; 6. Advanced Prose Composition*; 113B. Ancient Classical Drama in English.*

Health

DR. DEARHOLT, DR. D. R. MENDENHALL.

20. Local Health Officers' Work; 6. Study of the Human Body; 7. The Prospective Mother; 8. The Child in Health; 9. The Child in Disease.

Hebrew

PROFESSOR WILLIAMS, ASSISTANT PROFESSOR WOLFENSON.

1 and 2. Elementary Hebrew.*

History

PROFESSORS DENNIS, FISH, SELLERY; ASSOCIATE PROFESSOR CHASE.

1. United States History; 2. American History 1760-1830*; 6. English History*; 8A and 8B. Modern European History*; 12. Medieval History*; 20. Oriental and Greek History*; 21. Roman History*; 67. United States History Review; 89. English History Review.

Home Economics

PROFESSOR MARLATT; ASSOCIATE PROFESSOR CONLEY; INSTRUCTORS JENSEN, D. R. MENDENHALL, A. TURNER.

1. Food Study for the Inexperienced Housewife; 2. Planning the Family Dietary; 3. Dietetics; 5. Household Management; 6. Study of the Human Body; 7. The Prospective Mother; 8. The Child in Health; 9. The Child in Disease; 10. Sewing; 11. Study of Fabrics; 12. Muslin Garments; 13. Dressmaking; 14. Infants' Clothes; 15. Home Furnishing and Decoration; 19. The House and Its Management*; 20. Food and Nutrition*; 21. Applied Design*; 22. Selection and Preparation of Foods*; 25. Cooking for Rural School Teachers; 26. Sewing for Rural School Teachers; 27A and 27B. Cooking and Sewing (combined course for Rural School Teachers).

Italian

PROFESSOR SMITH; ASSISTANT PROFESSOR REED; INSTRUCTOR GALLAND.

1. Elementary Italian*; 2. Reading in Italian.*

Latin

PROFESSOR SLAUGHTER, ASSISTANT PROFESSOR PITMAN.

1. Elementary Latin*; 2. Caesar*; 3. Cicero*; 4. Virgil's Aeneid*; 6. Advanced Prose Composition*; 7. Livy: Books I and XXI*; 10. Cicero: De Senectute*; 12. Terence: Andria and Phormio*; 14. Horace: Odes*; 15. Horace: Satires and Epistles*; 16. Catullus*; 17. Roman Mythology*; 20. Cicero: Letters*; 113B. Ancient Classical Drama in English.*

Manual Arts

PROFESSOR CRAWSHAW, ASSISTANT PROFESSOR HENDERSON.

1. History and Literature of Manual Arts*; 2. Teaching and Supervision of Manual Arts*; 3. Organization of Manual and Industrial Arts*; 4. Vocational Education and Vocational Guidance.*

Mathematics

PROFESSOR SLICHTER; ASSOCIATE PROFESSOR DOWLING; ASSISTANT PROFESSOR BURGESS; INSTRUCTOR HOLT.

1. Elementary Algebra; 3. Plane Geometry; 4. Solid Geometry; 5. Plane Trigonometry*; 6. University Algebra*; 7. Analytic Geom-

etry*; 8. Elementary Calculus*; 11. Practical Arithmetic; 12. Mensuration and Practical Geometry; 13. Practical Algebra; 14. Practical Trigonometry and Logarithms; 15. Practical Calculus; 62. Elementary Algebra Review; 201A and 201B. Shop Mathematics; 40. Algebra for Engineers; 41, 42, and 43. Elementary Analysis*; 44. Differential Calculus*; 45. Integral Calculus*; 46. Integral Calculus*; 51. Agricultural Mathematics*; 55. Commercial Arithmetic; 56. Commercial Algebra*; 57. Mathematics of Life Insurance*; 65. Advanced Calculus*; 66. Differential Equations*; 67. Theoretical Mechanics*; 68. Higher Algebra*; 69. Differential Geometry.*

Mechanical Drawing

PROFESSOR PHILLIPS; ASSISTANT PROFESSORS HOGAN, MILLAR; INSTRUCTORS HILLS, WINN.

1 and 2. Elements of Mechanical Drawing*; 3. Descriptive Geometry*; 4. Freehand Lettering; 203. Shop Sketching; 204A and 204B. Shop Drawing; 205. Sheet Metal Drafting; 243A. Principles of Architectural Drawing.

Mechanical Engineering

ASSOCIATE PROFESSOR NORRIS; ASSISTANT PROFESSORS BASCOM, HENDERSON, HOGAN, SHEALY, WINNING; INSTRUCTORS HILLS, HOBBS, JACKLIN, LEHMANN, MITCHELL, NESBITT, WINN.

201A. Shop Arithmetic; 201B. Advanced Shop Mathematics; 203. Shop Sketching; 204A and 204B. Shop Drawing; 205. Sheet Metal Drafting; 206. Elements of Mechanics; 207. Strength of Materials; 208. Mechanism; 209. Machine Elements; 210. Advanced Design; 213. Practical Hand Firing; 214. Principles of Steam Engineering; 215. Heat; 216. Boilers; 217. Steam Engines; 219A. Gas and Oil Engines; 219B. Gas Producers; 219C. Gas Engine Design; 219D. Gasoline Automobiles; 219E. Gas Engine Ignition; 220. Test Methods; 222. Refrigeration; 223. Heating and Ventilation; 224. Power Plant Economics; 225. Compressed Air; 230. Engine Running; 231. Fuels; 234. Heating and Ventilating Public Buildings; 235. Principles and Practice of Plumbing; 241. Carpenters' and Builders' Arithmetic; 242. Lumber and Its Uses; 243A. Principles of Architectural Drawing; 272. Cupola Practice; 274. Foundry Metallurgy; 281. Hydraulics.

Meteorology**MR. MILLER.**

1. Meteorology*; 2. Climatology.*

Municipal and Sanitary Engineering**ASSISTANT PROFESSOR BASCOM.**

501. Roads and Pavements; 512. Disposal of Sewage.

Music**PROFESSOR DYKEMA, INSTRUCTOR TOWNSEND.**

- 1C. Theory of Music; 5C. Elementary Harmony*; 31C. Public School Music*; 61C. Advanced Harmony*; 75C. History of Music*; 97C. Community Music.*

Pharmacy

PROFESSORS FISCHER, KREMERS, KAHLENBERG; ASSOCIATE PROFESSOR BRADLEY; ASSISTANT PROFESSORS DENNISTON, GILBERT, KRAUSKOPF; INSTRUCTORS LANGENHAN, WAKEMAN.

1. Pharmacy*; 3. General Chemistry*; 5. Inorganic Preparations*; 12. Qualitative Analysis*; 10. Morphology and Classification of Flowering Plants*; 15. Plant Histology*; 30. Drug Assaying*; 35. Physiological Chemistry*; 40. Pharmaceutical Chemical Analysis*; 45. Microscopical Examination of Food Products*; 46. Microscopical Examination of Drugs*; 50. Pharmacology*; 51. Toxicology*; 20A, 20B, 20C. Prescription Practice*; 21A, 21B, 21C. Advanced Prescription Practice*; 21D. Prescription Incompatibility*; 22A and 22B. Pharmaceutical Technology*; 23A. Alkaloidal Assay*.

Philosophy

PROFESSOR SHARP; ASSOCIATE PROFESSOR OTTO; ASSISTANT PROFESSOR STARCH.

1. General Psychology*; 10. Ethics.*

Physics

ASSOCIATE PROFESSOR JANSKY, INSTRUCTOR KRANZ.

1. High School Physics; 51E and 52E. Physics for Engineers; 5 and 6. University Physics; 87. Elementary Physics Review.

Political Economy

PROFESSORS ELY, ROSS, SCOTT, GILLIN; ASSOCIATE PROFESSOR HESS; ASSISTANT PROFESSOR MELVILLE; INSTRUCTORS JAMESON, MCKAY.

1. Elements of Political Economy*; 2. The Labor Movement*; 3. Transportation*; 4. Socialism*; 5. Economics of Saving and Investment; 7. Commercial Geography*; 10. Elements of Money and Banking*; 10A. Brief Course in Money and Banking; 186A. Banks and Banking; 186B. Commercial Law and Negotiable Instruments; 15. Social Psychology*; 16. General Sociology*; 17. Practical Sociology*; 18. Criminology and Penology.*

Political Science

ASSOCIATE PROFESSOR C. LLOYD-JONES, ASSISTANT PROFESSOR MACGREGOR.

1. American Government and Politics*; 1A. The American Judiciary*; 1B. The American Executive and Executive Methods*; 3. Party Organization and Management*; 3A. American Legislatures and Legislative Methods*; 4A. American Diplomacy*; 4B. World Politics*; 5A. American Constitutional Law*; 5B. International Law of Peace*; 5C. International Law of War*; 6. American Municipal and Civic Progress*; 10. Municipal Government in Europe and the United States*; 22. Local Government.*

Public Speaking

PROFESSOR O'NEILL, ASSISTANT PROFESSOR BLANTON.

1. Elementary Speech Writing; 10. Composition of Public Addresses*; 12. Argumentation*; 21. Correction of Speech Defects*; 22. Voice Training and Elimination of Voice Defects.*

Spanish

PROFESSOR SMITH; ASSISTANT PROFESSOR REED; INSTRUCTOR GALLAND.

1 and 2. Elementary Spanish*; 3 and 4. Intermediate Spanish*; 7 and 8. Don Quijote.*

Structural Engineering

ASSOCIATE PROFESSOR HOOL, INSTRUCTORS FULLER, THIESSEN.

408 and 409. Elements of Structures; 410. Roof Trusses; 411. Plate Girder Bridges; 412 and 413. Bridge Trusses; 415, 416, and 417. Masonry Structures; 418A, 418B, and 418C. Reinforced Concrete Construction; 421. Steel Building Construction; 430. Practical Course in Concrete; 431. Structural Steel Drafting and Elementary Design.

Surveying

ASSOCIATE PROFESSOR HOOL, ASSISTANT PROFESSOR BASCOM.

441. Plane and Topographic Surveying with Field Problems.

Teachers' Reviews

PROFESSOR WHITBECK; ASSOCIATE PROFESSORS CHASE, JANSKY; ASSISTANT PROFESSORS BEATTY, BURGESS; INSTRUCTORS BASCOM, GANGSTAD, HOYT, KRANZ, VAN DEUSEN.

61. Arithmetic; 62. Elementary Algebra; 63. Grammar and Elementary Composition; 65. Geography; 67. United States History; 69. Civil Government; 71. Physiology and Hygiene; 73. School Management; 77. Physical Geography; 79. English Composition; 81. American Literature; 83. Cataloguing and Use of the School Library; 87. Physics; 89. English History; 91. English Literature.

INSTRUCTION BY LECTURES

PAUL F. VOELKER, SECRETARY AND EXTENSION LECTURER.

Purpose

For instruction and platform inspiration in communities where the lyceum need exists the Department of Instruction by Lectures organizes and supplies local programs.

Scope of Service

The University offers through this department (1) single lectures or series of such lectures; (2) lecture, concert, recital, or reading programs or a miscellaneous combination of these. Such programs are offered with the definite purpose of developing better taste and higher standards with reference to public entertainments, and an appreciation of art, music, and literature by presenting examples.

LECTURES. The field covered by the lecture courses is a wide one, including topics in education, history, geography and travel, political economy, political science, sociology, business administration, the history and literature of ancient and modern peoples, including Greek and Roman, Scandinavian, German, French, and English life and letters, the physical sciences, engineering branches, forestry and physical training. The bulletins containing details of information will be sent on request.

WISCONSIN CHAUTAUQUAS. This department arranges one-week programs during the month of July in communities that desire or feel the need of the instruction, inspiration, and social results of the basic feature of the chautauqua movement.

TEACHERS' CONVENTIONS AND INSTITUTES. The Extension Division will provide speakers for these meetings as far as the regular work of the University will permit.

COMMENCEMENT ADDRESSES. This department arranges for commencement addresses to be delivered by members of the university staff and others available in this service. The charges will be arranged in each case for the speaker desired through the Extension Division.

SPECIAL OCCASION LECTURES. This department furnishes speakers for special occasions, such as memorial and dedication exercises, convocation addresses in schools, commercial organizations, and civic and women's clubs.

Expenses

LOCAL EXPENSES. These include hall rent and advertising in the local papers, and the lantern and operator, where the lecture is illustrated.

UNIVERSITY CHARGES—LECTURERS' FEES. Full information concerning lecturers' fees will be supplied on application.

DEBATING AND PUBLIC DISCUSSION

ALMERE L. SCOTT, SECRETARY.

Purpose

For the assistance and instruction of citizens who are interested in important social, educational, and political problems, the Department of Debating and Public Discussion fosters forum activities for deliberative study and discussion.

Inasmuch as the intelligent and active interest in and study of these questions among all classes of people tends essentially to the making of good citizens, the department issues suggestive and guiding bulletins, collects and maintains a loan library available through parcel post, and keeps in close touch through correspondence and personal interviews with community centers, civic clubs, farmers' clubs, women's and business men's organizations, teachers' and other professional men's associations, school and library boards, literary societies of educational institutions, particularly of the rural state graded, county agricultural, and county training schools, seminaries, and academies, and all similar organizations throughout the state.

Bulletins

Several compact and useful guides have been issued as aids to debaters, including Debating Societies—Organization and Procedure; Principles of Effective Debating; How to Judge a Debate; Triangular Debating Leagues; and School Literary Societies. The latter contains over fifty questions stated for debate. As aids to organizations, bulletins on Farmers' Clubs and Civic Clubs have been published.

FORMULATED QUESTIONS. The bulletins which formulate subjects for debate, giving brief historical facts and arguments, concluding with a selected, classified bibliography, serve as an impetus to careful study and have proved helpful and time-saving. Such questions as the following have been thus presented: Annexation of Cuba and Independence of the Philippines; Closed vs. Open Shop; Commission Plan of City Government; Consolidation of Rural Schools and Free Textbooks; Initiative and Referendum; Municipal Home Rule; The Recall; and Restriction of Immigration. These publications are sent free upon request to Wisconsin citizens, and upon receipt of list price, outside of the state. A list of the bulletins available will be mailed upon request.

Loan of Material

The loan package libraries include mounted newspaper clippings, office bound sections of periodicals, government documents, publications of organizations, copies of addresses, reprints, type-written excerpts, books—in fact all forms of carefully selected available material dealing in a fair and balanced manner with the different phases of worthwhile subjects. This service is restricted to residents of Wisconsin. In order that material may be selected judiciously, it is essential that the request for a package library state definitely the purpose for which the information is desired, and the latest date upon which it would prove of value. The same material cannot be used to the best advantage by a rural school pupil and a member of a woman's club.

The department aims to cooperate in every possible way with local librarians. Requests from communities which have public libraries should state what is available there, thus avoiding unnecessary duplication and expense. The requests from librarians and from citizens in communities having no library facilities are given preference.

GENERAL INFORMATION AND WELFARE

JOHN LEWIS GILLIN, SECRETARY AND PROFESSOR OF SOCIOLOGY.

Purpose

The Department of General Information and Welfare constitutes a clearing-house through which all reasonable inquiries of the people of the state on general matters may receive consideration. The department disseminates methodically information bearing on public welfare.

The researches of government bureaus and commissions, of experiment stations and laboratories, of scientific institutions and associations, are often imbedded in voluminous technical reports. Thus they do not serve their full measure of usefulness. The department digests and edits these documents into a form which retains all the essential facts adapted to nontechnical and democratic needs.

Reports are made by the department upon questions of food, hygiene, and sanitation; discoveries affecting the cure and prevention of disease; economic, political, social, and ethical topics; educational matters; the conservation of resources; agricultural, engineering, manufacturing, and commercial conditions; recreation and social health; child labor; municipal problems; the aesthetic and economic requirements of life in country and in city; home furnishing and decoration; landscape design; architecture; music; and similar subjects, as demands for such information arise.

Method

Information is gathered by this department and presented in suitable form for distribution. The department also secures expert advisers for communities having special problems to solve.

To conduct several specific lines of welfare work, the Municipal Reference Bureau; the Bureau of Civic, Commercial and Community Development; the Health Instruction Bureau; and the Community Music Bureau have been organized, each with an expert on the particular field in charge.

Bulletins on the service of any one of these branches of work may be secured on request.

Exhibits

In addition to specific lines of activity named below under the various bureaus, the Department of General Information and Welfare provides, for the general good, travelling welfare exhibits, and organizes local programs, and vocational, social, and community institutes on various aspects of general welfare work. Among others may be mentioned a child welfare exhibit, a health exhibit, two exhibits on recreation, and a community center exhibit which have been shown in a large number of Wisconsin cities. The exhibit and demonstration method of instruction has proved so successful that these various exhibits have been displayed in more than two score community and social service institutes held in various parts of the state, and in twenty Wisconsin Week programs during the past three years. These exhibits consist of statistical charts, pictures, models and descriptive literature, interpreted by an expert and accompanied by a program of talks, addresses, and conferences upon the subject of the exhibit. For some years several departments of the University have cooperated with the Wisconsin Anti-Tuberculosis Association in accumulating an effective and instructive tuberculosis exhibit which has been widely used in this connection throughout the state. These exhibits are sent by the Extension Division to communities in the state upon application without cost beyond the expense of transportation.

Social Service Institutes

The Extension Division is prepared to put into the larger centers of Wisconsin a Social Service Institute lasting for such periods as seem desirable, and providing intensive study at a nominal registration fee for those interested in such subjects as the relief of poverty, recreation, juvenile delinquency, child welfare, and similar topics. The subjects to be treated will depend in each case on the problems of the locality where the institute is to be held.

Vocational Institutes

In vocational institutes, lectures and demonstrations dealing with the latest investigations of experts who stand at the head of their special lines of research are presented in such simple and practical form as to be readily available by the crafts, for example such programs as were organized on several occasions for the bankers of the

state. The Extension Division will arrange for and conduct vocational institutes of one or more days' duration as desired.

Community Music Bureau

To enable the people of local communities to develop their musical interest, the Bureau of Community Music offers in addition to the correspondence-study courses given under another department, the services of a leader for the organization of community choruses, lectures, and other forms of instruction and assistance to the people of the state.

Municipal Reference Bureau

To meet the need for information in the important field of municipal government, information which is difficult to obtain and hard to keep up to date, a Municipal Reference Bureau has been established for the service of the cities of the state. It collects and furnishes technical information on all subjects of municipal organization and administration, public works, public utilities and public service rates, commission and city manager government, home rule, civic organizations, and gives also information on municipal employment, paving, parks and playgrounds, housing, dust prevention, smoke abatement, city planning, civic centers, art commissions, care of city trees, schools, accounting methods, comparative statistics, and other subjects of municipal interest. The bureau collects and maintains a file of charters, ordinances, and official publications of the principal cities of the United States. It has correspondents in most of the American cities, and in this way is able to furnish information as to which cities have passed an ordinance of any type, for instance a milk ordinance, or a wheel tax ordinance; to present data as to the efficiency of different types of ordinances; and, if desired, to lend copies of particular enactments. It can tell how boards of public works are organized in various cities, how school boards are constituted, or how street sprinkling or street repairs are paid for. In short, it aims to be a clearing house for municipal experiments and experiences.

Municipal and Sanitary Engineering Service

There is offered technical assistance to communities in the solution of problems in municipal and sanitary engineering. The subjects covered by this branch of service are: water supply, sewerage

and sewage disposal, roads and pavements, refuse and garbage disposal, general sanitation, street cleaning and sprinkling, city planning, plumbing regulations, and other engineering subjects touching the welfare of the communities of the state.

This service is rendered by a municipal and sanitary engineer, and is free except that the expense of travel must be paid by the community served if it is found necessary to make a trip.

Civic, Commercial and Community Development Bureau

Community organizations are a necessary and vital factor in the development of community life. Individuals can do something in this direction. But collective action, team play, where each submerges his identity for the time being in behalf of the community as a whole, accomplishes more. The slogan of the day is, "Individuals prosper as the communities in which they live thrive."

COMMUNITY CENTERS

Advice is given on the organization and conduct of community gatherings. The use of public buildings, especially school buildings for these community assemblies, is encouraged. These gatherings are non-partisan, non-sectarian meetings, designed to promote the civic, social and educational welfare of the community. Suggestions on preparation of programs and construction of school buildings to provide for community center activities may be had through personal correspondence with the bureau.

SERVICE TO COMMERCIAL CLUBS

The modern commercial club is a community organization. It has two functions. It seeks to develop both the civic and the commercial life of the community. It is hoped that this bureau will constitute a clearing-house for information relating to the activities of these bodies. It is desired to cooperate in every way with Chambers of Commerce and Advancement Associations, to furnish speakers from time to time for regular monthly and special meetings, to aid in the organization and reorganization of commercial clubs, and to suggest ways and means of increasing their efficiency, and thereby their usefulness.

COMMUNITY INSTITUTES

A number of community institutes are held each year for towns and cities having special problems of a civic, a social, an educational,

or a commercial nature to solve. The institute is carried on for two or three days in each place. The program is built for the peculiar needs of the town after a careful survey of local situations has been made. There is something for the farmer, the business man, the housewife, the boys and girls, and the community at large. Motion pictures, illustrated lectures, charts and exhibits, are used to make clear and vivid the best available knowledge on the problems under consideration.

Health Instruction Bureau

The Health Instruction Bureau was established for the purpose of recasting into popular form scientific knowledge regarding the prevention and cure of disease. News health items are widely disseminated throughout the state, and exhibits, lectures, and correspondence-study courses are doing their work of educating the public in measures of prevention, care, and cure. The bureau undertakes to translate and make available the knowledge of the scientific departments through the main channels indicated. For this purpose it maintains a close relationship with a number of extra-mural and federal departments and organizations from, and in cooperation with which, information is secured and disseminated.

Visual Instruction Bureau

For several years the Extension Division has lent lantern slides, motion picture films, and other illustrative material to schools and other institutions and organizations. This service has now been organized into the Bureau of Visual Instruction, which is making a thorough and systematic study of materials that may be used in illustrative teaching, or in instruction through the medium of the eye, and placing such materials within easy and constant reach of all schools and other civic organizations of the state. The bureau has a carefully selected collection of educational lantern slides and motion picture films to be lent to schools for use in class work and for community gatherings. During the year 1915-16 nearly 20,000 lantern slides on more than 200 subjects and 150,000 feet of motion picture film on 125 subjects were available for use through this bureau. Six circuits were established on which the material was routed weekly to 175 schools which applied for regular service for 25 weeks in succession. In addition occasional service is being given frequently to schools and civic organizations not in circuits.

SCHOOL OF MUSIC

CHARLES H. MILLS, DIRECTOR, PROFESSOR OF MUSIC.

GENERAL ANNOUNCEMENT

The School of Music offers the following courses: a four-year course leading to the degree of Bachelor of Music; a two-year course leading to the certificate of Supervisor of Public School Music.

The music credits which may be secured by candidates for degrees other than in Music are limited to twenty.

Advanced instruction in pianoforte, organ, voice culture, and violin may be taken as electives by juniors and seniors of the University, upon consultation with the Director of the School of Music, after meeting the Examination Committee of the School. Credit, not to exceed a total of ten semester hours, is given on the same basis as for other collegiate studies.

Individual instruction in vocal or instrumental music may be taken by students not otherwise connected with the University, and such students are not required to pay the incidental fee required of all university students, but they must be able to satisfy the usual entrance requirements.

Special students, twenty-one years of age, are admitted to the School of Music under the regular provisions of the College of Letters and Science as "Adult Special Students."

Special students, under twenty-one years of age, who have unusual musical talent, may, in exceptional cases, be admitted to the School of Music on the recommendation of the Faculty of the School although they may not be able to satisfy fully the entrance requirements.

Students wishing to enter the School of Music will apply to the Registrar, Room 158, University Hall.

A detailed statement of musical courses will be found under Music in the College of Letters and Science.

COURSE OF STUDY LEADING TO THE DEGREE OF BACHELOR OF MUSIC

PROFESSOR MILLS, CHAIRMAN.

MUSICAL REQUIREMENTS FOR ENTRANCE**Organ**

No previous knowledge of organ playing is required, but a student must be well grounded in pianoforte playing, must possess a correct technique, and be able to read four-part music.

Pianoforte

Applicants for admission will be expected to play music of the grade of Mozart's Sonata in D major, No. 3, Peters Edition; Loeschhorn, Op. 52 and Op. 66; Bach, Little Preludes.

Violin

Candidates must be well grounded in correct position, intonation, tone, and bowing, and must have mastered the equivalent of David's Violin School, Part I, and the easier pieces of Dancla, Alard, and others.

Voice Culture

The student must be able to read simple music and must have had an amount of training equal to the first half of Concone, with the usual technical study for the same period.

Courses of Instruction**Freshman Year**

First semester: Applied Music: 2 half-hours of instruction and not less than 6 hours of practice per week, 2 cr.; Theoretical subjects: Harmony A; Solfeggi 71; Harmony 1, 3 cr.; English 1a, 3 cr.; *French, German or Italian, 4 cr.; History, 3 cr.; Physical Education. Total 15 cr.

Second semester: Same as first. Total 15 cr.

*French 1, 4, 10. German 1a to 2b, 3, 14. Italian 101.

Sophomore Year

First semester: Applied Music: 2 half-hours of instruction and not less than 6 hours of practice per week, 2 cr.; Theoretical subjects: Solfeggi 75, 1 cr.; Harmony 11, 3 cr.; Aesthetics 61, 2 cr.; English 30, or other electives in English, 2 or 3 cr.; French, German, or Italian, 4 cr.; Music Electives, 2 cr.; Physical Education. Total 15 or 16 cr.

Second semester: Same as first semester. Total 15 or 16 cr.

Junior Year

Music 21, Counterpoint, 2 cr.; Music 31, History, 2 cr.; Music, Prescribed electives, 5 cr.; Letters and Science, *Electives 3 cr.; Electives, 3 cr. Total 15 cr.

Senior Year

Music 35, Thesis, or Music 35, Recital, 2 cr.; Music, prescribed electives, 4 cr.; Music, free electives, 3 cr.; Letters and Science, **Electives, 6 cr. Total 15 cr.

Prescribed Electives

Advanced Harmony, Music 102

Advanced Counterpoint, Music 112

Canon and Fugue, Music 122

Ensemble Music 85 and 86

Selection and Interpretation of Materials 78

Applied Music 81-2-3-4

Pedagogical subjects

Practical Instrumentation 89

The maximum credits for students in individual instruction in Applied Music will be 16.

Music total.....	66
Letters and Science.....	54 or 56
Total.....	120†

All candidates for the degree of Bachelor of Music are required to pursue their studies in accordance with the above schedule.

*Psychology and education, three credits required for students registered in the Course for the Training of Teachers.

**Physics 1 including Acoustics by arrangement with Department of Physics.

†The same number of grade points are also required.

Voice students are subject to the following exceptions: First, membership in the Choral Union is obligatory, unless excused by the director. Second, at least two years of pianoforte study are required in addition to the prescribed work in voice, but the second year of pianoforte study is substituted for elective in the second year. Third, Counterpoint, Composition, and Instrumentation are not required.

Organ students are subject to the following exception: Those not sufficiently proficient may be required to take work in pianoforte during the first and second years, this to be decided by the instructor and the director.

Violin students are required to take two years of pianoforte study in addition to the prescribed work in violin, and may substitute those credits for electives.

There is opportunity for a liberal choice of electives in addition to the required studies enumerated above. These may be chosen from other courses offered by the School of Music, or by other departments of instruction in the University on consultation with the director or an adviser appointed by him.

Students must prove their efficiency before their graduation either by giving a recital or writing a thesis on a given topic. Students are allowed a choice of these alternatives on consultation with the director or an advisor appointed by him. Two credits are allowed for either recital or thesis. The latter is subject to the usual regulations.

Department of Public School Music

PROFESSOR DYKEMA, CHAIRMAN.

Course for Supervisors of Music in Schools

This is a two or three year course designed for those who wish to fit themselves for the supervision of music in the public schools.

For entrance requirements see Admission page 92.

A Supervisor of Music Certificate is granted on the completion of the course. Students expecting to proceed to the degree of Bachelor of Arts must satisfy the requirements for that degree.

Students regularly enrolled in the Supervisor's Course will be allowed credit for work in pianoforte, violin and voice culture, under the provisions of electives.

Students who, upon entering, do not show suitable proficiency in pianoforte playing or singing (voice culture), will be required to take instruction in one or both at the discretion of the director and the chairman of the Department of Public School Music.

Students are required to take from 14 to 16 hours per week in recitations, lectures, etc., making 62 credits for the course.

Membership in the Choral Union is obligatory, and is not counted as an elective credit.

In the second year, not later than June 1, all candidates for graduation must submit an original outline covering one of the standard textbook series. This work is subject to the regulations under Theses (See Index).

The required work is as follows:

First Year

Music 41, Methods, 3 cr.; Music 42, Practice, 1 cr.; Music 1, Harmony, 3 cr.; Music 71, Solfeggi, 0 cr.; Music 61, Aesthetics, 2 cr.; Music 89, Practical Instrumentation, 1 cr.; Music 77, Choral Union, Letters and Science, Education 44, 2 cr.; English 1, 3 cr.; Physical Education 6. Total 15 cr.

Second Year

Music 51, Methods, 2 cr.; Music 52, Practice, 2 cr.; Music 11, Harmony, 2 or 3 cr.; Music 75, Solfeggi, 1 cr.; Music 31, History, 2 cr.; Music 76, Thesis, Music 77, Choral Union. Letters and Science, *Electives, 6 cr.; Physical Education. Total 15 or 16 cr.

Special State Certificate

Students satisfactorily completing the two-year course for Supervisors of Music will be entitled to a recommendation to the State Board of Examiners to receive a special state license to teach music in the public schools of the state. This recommendation will be issued by the Director of the Course for the Training of Teachers (Prof. V. A. C. Henmon, University Hall, 217), providing:

(a) That the student registers in the Course for the Training of Teachers not later than December 1st of the first year of residence:

*The following courses are recommended as electives: Astronomy 1. Biology 1, Chemistry 1, Education 113, Fine Arts 1, French 1a, 1b, 10. Geology 1, 3, 4, German 1a, 2b, 3, 14, Greek 5a, 5b, History 1, 5, 10, Italian 1, Latin A and 6, Mathematics 1 and 2, Physics 1, Psychology 1. (Courses in Home Economics may not be elected by second year students expecting to proceed to a baccalaureate degree).

(b) That the student has earned the following credits as electives: Philosophy 1 (Psychology), three credits; choice of the following three-fifth subjects: Education 1 (History of Modern Education), Education 6 (Public Education), Education 11, (Mental Development), Education 41 (Educational Psychology).

(c) That the student presents a statement from the Director of the School of Music as to general fitness for teaching.

Addendum; General Course for Grade and High School Teachers

This course is designed for teachers who expect to combine the teaching of other branches with the subject of music, in grade and high schools. This class meets twice a week throughout the year. The work consists of a study of the technical points to be presented in the school and the practice of songs suitable for school use. This course is of value to those who expect to teach in the public schools or who wish to conduct high school choruses, and includes training in conducting. The course is open to university students without an additional fee. Persons not in the University are admitted on the payment of the incidental fee of \$12. (Collegiate Course 45, 2 credits.) Not given 1915-16.

Public School Drawing

Students who take the two-year Supervisors' Course will find it to their advantage to devote some attention to preparation for the teaching of drawing. For this purpose the following elective courses in the Department of Manual Arts are available: Course 50, Free-hand Drawing and Perspective (first semester); Course 51, Free-hand Drawing and Illustration (second semester); Course 52, Methods, Public School Drawing and Design (first or second semester); Course 53, Practice Public School Drawing and Design (throughout the year); Course 1, Elements of Mechanical Drawing (throughout the year).

Instruction in Applied Music

Pianoforte: Mr. Mills, Miss Regan, Mr. Townsend, Miss Carter.
Voice Culture: Mr. Chamberlain, Miss Bergman, Miss Currie.
Organ: Mr. Mills, Miss Eastman.
Violin and Viola: Mr. von Geltch.

Orchestral Instruments

Violoncello and Double-Bass:

Wood-Wind Instruments: Mr. Saugstad.

Brass Instruments: Mr. Saugstad.

Orchestra

MR. SAUGSTAD.

The University Orchestra is composed of about sixty-five of the students of the University. The purpose of the organization is the study of the larger classical forms, as well as cooperation with the Choral Union, in performance of representative choral works. The orchestra gives several concerts throughout the year.

Rehearsals are held weekly in Music Hall from October to May. Membership is open to the entire student body, including graduate students, provided they possess sufficient knowledge of any orchestral instrument to pursue the work profitably. After two semesters' connection with the orchestra a student may receive a credit of one hour for each of the two following semesters. This work is catalogued as collegiate course 76.

Band

MR. SAUGSTAD.

The Regimental Band, consisting of two sections of about sixty and thirty-five men, is open to all students possessing the necessary qualifications. The band represents one of the most important musical activities at the University, and gives some fifty performances each year. Each section rehearses in Music Hall twice a week throughout the year. Freshmen and sophomores belonging to the band receive military credit. Students who desire to join should confer with the bandmaster.

Choral Union

MR. DYKEMA.

The Choral Union is open to all members of the University interested in studying and presenting oratorios and standard choral works.

Membership is also open to others not in the University. There is a membership fee of one dollar a year. At least two performances.

(one at Christmas and one in the spring) are given each year. Rehearsals are held weekly in Music Hall from October to May.

This work is catalogued as collegiate course 77, and is open as an elective to students of all schools and colleges. University credit of one unit-hour for the whole year is granted at the end of the season. Freshmen are eligible for membership, though without credit for the first year.

University Men's Glee Club

MR. CHAMBERLAIN.

The University Men's Glee Club is an organization of twenty-four men. This club, together with the Mandolin Club makes at least one extensive tour during the school year. Vacancies are filled by competitive trial, and membership is open to the entire student body, including graduate students.

University Girls' Glee Club

MR. MILLS.

The University Girls' Glee Club is an organization of thirty-two women. Frequent public appearances are made locally. Vacancies are filled by competitive trial and membership is open to the entire student body, including graduate students.

Recitals and Concerts

All music students are required to attend the concerts, recitals, and lectures (public) given under the auspices of the School of Music.

Artists' Recital Series

The Artists' Recital Series consists of an annual course of recitals of chamber music.

Students enrolled in the School of Music are required to attend these concerts for which a fee of one dollar a year is charged (payable at the time of registration).

Students' season tickets at \$1.00 are available to all students of all schools and colleges of the University.

Season tickets at moderate cost are also available to the general public.

Faculty Recitals and Lectures

Lecture-recitals and concerts, open to the public without charge, are given by members of the Faculty of the School of Music at stated intervals during the concert season.

Student Recitals

Student recitals, free to all students of the University and open to all others by invitation, are held at frequent intervals throughout the collegiate year.

Public performance being part of the course of study in a practical subject, all students are required to participate in a program when they are, in the instructor's opinion, sufficiently prepared.

Equipment

The School of Music is provided with a concert auditorium, lecture hall, teaching rooms for applied music, practice rooms, a two-manual organ, pianos, orchestral and band instruments, and an equipment of mechanical instruments.

Tuition for Theoretical Subjects in Music

Resident tuition.....	free
Nonresident tuition, per semester.....	\$62 00
Incidental fee for all students, per semester.....	12 00

All students of the School of Music who are studying for the degree of Graduate in Music or for the Supervisor of Music Certificate must pay the incidental fee of \$12 a semester, but neither the incidental fee nor nonresident tuition is required of students taking only applied music in private instruction. Persons who are members of other schools and colleges of the University may take the theoretical courses in music without charge.

The fees in any subject are the same for all teachers and are as follows:

Private Instruction Once a Week per Semester

One-half hour of instruction.....	\$20 00
One hour of instruction.....	36 00

Private Instruction Twice a Week Per Semester

One-half hour of instruction.....	\$36 00
One hour of instruction.....	72 00
Note—Students regularly enrolled in the university orchestra or band are entitled to half rates for tuition in stringed instruments, wood-wind, or brass.	
Piano practice, each semester, one hour daily.....	\$3 00
Organ practice, each semester, one hour daily.....	9 00
Concert fee.....	1 00

Note.—No deductions are made for absences except in cases of protracted illness, when a rebate of one-half the fee for the time lost will be granted. All university holidays will be observed without make-up of lessons.

Students enrolling at any time previous to the fifteenth day of any semester will be charged the full fee for that semester. Students enrolling thereafter may receive some reduction at the discretion of the director.

All fees must be paid before the third lesson unless otherwise excused by the director. Teachers are not permitted to give instruction after the second lesson without receiving notice that the student's fees are paid.

Rules and Regulations

The School of Music calendar is the same as that of the University, including two semesters of about eighteen weeks each, and a summer session of six weeks; but students in Applied Music may enter at any time.

No student is expected to take part in any public performance without the consent of his instructor and the director.

General Directions

All students in the four- and two-year course in music must present their registration card from the Registrar's office before being assigned work in the School of Music.

All students in Applied Music must present an Applied Music registration card before registering in the School of Music.

New students in Applied Music will be examined by the Examining Committee of the School of Music to learn the status of their work and to determine whether or not the subject can be taken for

credit in the case of juniors and seniors from the College of Letters and Science. This committee will meet from ten to twelve on the first Tuesday, Thursday, and Friday, Sept. 25, 27, and 28, and on Wednesday at eleven throughout the semester when necessary. Appointments to meet the committee may be made with the secretary.

The office of the director in Music Hall at the University will be open for several days before the opening of each half semester for the reception of students and assignment of courses. After the opening of the University the director may be found at Music Hall from 11 to 12 and from 2:30 to 3:30 daily, Saturdays excepted.

For further information address

C. H. Mills,
Director, School of Music,
The University of Wisconsin,
Madison, Wisconsin.

DEPARTMENT OF PHYSICAL EDUCATION

T. E. JONES, CHAIRMAN.

PROFESSORS HETHERINGTON, WITHINGTON; ASSOCIATE PROFESSOR MEANWELL, Director Men's Gymnasium; ASSISTANT PROFESSORS TRILLING, Director Women's Gymnasium, ELSOM, JONES; INSTRUCTORS BROWN, BROWNELL, DRIVER, FORBES, HINDMAN, LIPPITT, McKEE, MCCHESENEY, QUICK, STEVENSON, VAIL; ASSISTANTS AYER, BUCK, KING, STEINAUER, SOUCY; STUDENT ASSISTANTS WYATT, WHITE, DOHERTY, SANDS.

Jurisdiction

The Department of Physical Education has jurisdiction over all athletic, aquatic, and gymnastic activities.

Aims

The aims of the department are as follows:

A. Student Growth and Development

1. To contribute to health, organic vigor, and good physical habits;
2. To provide an incentive and an opportunity for every student to secure at least one hour's physical activity daily as a balance to the sedentary demands of university life;
3. To conserve the social and moral values of games and sports and to secure to every student the fullest opportunity for their practice.

B. Training of Teachers

To train physical educators and play leaders.

C. Extension

To promote a more effective organization of play and administration of physical education throughout the state of Wisconsin.

Equipment

The Men's Gymnasium is 200 feet in length by 100 feet in width, with an annex, 225 by 84 feet. On the ground floor are the offices, locker rooms, bathrooms and swimming pool, and a special room for corrective exercise. On the second floor are the offices of the Military Department and an unobstructed hall 165 by 98 feet used for the purposes of military drill and games. On the third floor are the visitors' gallery of the drill hall, the military club room, and the wrestling room.

The fourth floor contains the gymnastic hall, 165 by 65 feet. The equipment includes the usual apparatus and four handball courts. The annex contains a 12 lap cinder track, a baseball cage with floor of earth, and the rowing room.

The Women's Gymnasium occupies five floors of Lathrop Hall, erected in 1910. The main exercising room is two stories high with floor 118 by 60 feet, visitors' gallery, stage, and running track. The concert room, 72 by 42 feet, is used for smaller classes. An auxiliary class and game room, 42 by 72 feet, and a lecture room are on the fifth floor. The equipment includes a complete outfit of developing appliances and the best modern types of light and heavy apparatus.

Two floors of one wing contain dressing rooms, showers, and lockers designed for the accommodation of 1,000 women. In the basement are four regulation bowling alleys; the swimming pool, 60 by 26 feet, well lighted and ventilated and supplied with filtered water; dressing rooms, showers, and hair drying apparatus.

The outdoor facilities include the university athletic field at Camp Randall—33 acres, the women's field at Memorial Park—3 acres, the men's playground on the lower campus—2 acres, and twenty-three tennis courts. The university roads, drives, and paths afford excellent courses for cross country running. The university boathouses next to the men's Gymnasium on the shore of Lake Mendota contain ten 8-oared shells, two 8-oared barges, two 4-oared shells, two 4-oared barges, two 4-oared gigs and four "war" canoes and storage room for canoes belonging to students.

A modern 40 horse-power, high-speed launch, supplied with complete life saving equipment, is kept in constant commission for instant service throughout the boating season.

For outdoor sports in winter there are a toboggan slide, 1,400 feet long and 100 feet high, and opportunities for skating and hockey on Lake Mendota.

Requirements

Physical training is prescribed for all first and second year students throughout the college year, two periods a week for men and four indoor or 3 outdoor for women.

Men students are required to be able to swim a distance of fifty yards, women thirty-five yards, by the end of the sophomore year.

Students may not be excused from the prescribed training during the first two years without substituting an equivalent satisfactory to the department, or making up the work before graduation, for which permission must be secured in advance.

Credits to the extent of four (4) for men and eight (8) for women must be secured in Physical Education by the satisfactory completion of the regular courses.

Election of specialized sports and exercises (course 2) may be made by students as soon as they have attained the minimum standard of vigor, development, and skill. This will usually occur at the end of the first year. Freshmen who have attained the required standard at the time of entrance may elect their exercises under course 2.

For the purposes of this department the college year is divided into three seasons: *Fall*—October and November; *Winter*—December, January, February, March; *Spring*—April, May, and June. All activities are conducted out of doors in so far as the weather will permit. Regular indoor exercise is confined to the winter months.

The regulation suit for men consists of white sleeveless shirt, running pants, supporter, and rubber soled shoes. For outdoor sports students will require heavy shoes, khaki trousers, and negligee shirt or jersey.

For women a uniform suit is required and should be purchased in the fall in Madison. Price \$5.

The locker and laundry fee is \$1.25 each semester, required of each freshman and sophomore. Upperclass women using the women's baths and swimming pool pay a laundry and suit fee of \$1.25 each semester.

Medical and Physical Examinations

The organic condition, stage of physical development, and degree of motor efficiency attained by each entering freshman and sophomore are determined at the opening of the college year by a series of examinations and tests made by the Department of Clinical Medicine and the Department of Physical Education.

An endeavor is made to determine the student's exact organic condition with a view to outlining for him a proper regimen of exercise, diet, rest, and work. Students are classified on an organic scale and are permitted to engage only in such sports and games for which they are physically fitted.

No student is permitted to participate in competitive games either of intercollegiate or intramural grade unless physically fit for the same as determined by the examinations.

All candidates for football and other teams must be examined by and secure the permit of the Department of Clinical Medicine as well as that of the Department of Physical Education before reporting for practice with their squads.

Enrollment and Assignment.

All first year women will meet in Concert Room, Lathrop Hall, Thursday, September 20, 1917, at 3:30 to register and be assigned a date for examination. All second year women will register on the same day at 4:30.

All first year men and women are assigned to physical education periods in the same manner as to other class periods by the Freshman Assignment Committees.

All second year men of the Colleges of Agriculture and Engineering will be assigned to class periods by the committees of those colleges. All second year men of the College of Letters and Science will arrange their elections in this department at the department office before Saturday, September 22, 1917.

All required activities of the Department of Physical Education begin Thursday, September 27, 1917. All absences on and after that date must be made up.

Tournaments and Contests

Interclass and intercollege tournaments and contests are conducted in all games and sports under the supervision and control of the department.

In the conduct of the men's activities the department has the cooperation of the Intramural Athletic Committee of the Student Athletic Board, consisting of five students representing Agriculture, Commerce, Engineering, Law, and Letters and Science.

The Women's Athletic Association cooperates with the department in the conduct of women's activities.

These two student organizations determine the rating of the various sports and the awards for achievement in the contests and tournaments.

The University is a member of the Intercollegiate Conference Athletic Association and maintains representative teams in all intercollegiate sports. No student may be a member of an intercollegiate team unless (1) he is eligible according to the requirements of the Student Life and Interest Committee, (2) has been a year in the University, (3) has no conditions in his various courses, (4) has received a weighted average of 77 in the work of the previous semester, and (5) is carrying full work.

Intramural and intercollegiate sports are under the government of the Athletic Council, a subcommittee of the Faculty Committee on Student Life and Interests.

Voluntary Exercise

All students are urged to secure at least one hour of recreative exercise each day and the facilities of the entire department are open for this purpose whenever not required for prescribed activities. Advice and direction may be secured by any student at any time. All advanced practice courses are open to any student fitted to take them.

Professional Training

(See also pp. 189—192 and p. 250 or p. 262.)

Courses are planned to meet the needs of five classes of students: First, students desiring to major in Physical Education and become responsible instructors or directors; second, students desiring to minor in Physical Education in preparation for combining leadership of physical training activities with some academic subject in high schools; third, students desiring a general familiarity with the problems of physical education as a part of their equipment for positions as principals or superintendents in the public schools or for positions as social center directors; fourth, students desiring academic courses in physical education as a part of a liberal education.

The courses listed cover instruction in seven phases of work: (1) technical physical training activities, e. g., games, athletics, dancing, aquatics, gymnastics, etc.; (2) the functions and values of vigorous psycho-motor activities in the development of the child and in the recreative habits of the adult; (3) the growth, needs, and

physical capacities of children and youth by age periods; (4) the physical examination and the classification of children and youth according to needs and fitness to participate in different activities; (5) the analysis and adaptation of activities to group and individual needs and capacities; (6) the principles of teaching and the methods of leadership in molding the moral expression of the powerful instincts expressed in play and in establishing hygienic and recreative habits; and (7) the principles of organization, management, and administration.

The requirements for a major are designed to prepare students for a responsible direction of physical training activities in all their developmental, hygienic, and social relationships. The development of physical education in the public schools, the rapid rise of playground organization, the emphasis on physical training activities in social centers and their introduction into social welfare institutions, are continually increasing the demand for well-trained physical educators who can make the activities of the gymnasium, playground, and athletic field physically safe and developmental, morally constructive, and a source of recreative habits that will last for life and conserve adult physical resources. These responsibilities require a training in the seven phases of work outlined above with a preliminary training in biology, chemistry, anatomy, physiology and psychology. Students, therefore, desiring to major in Physical Education should declare their intentions at the time of entrance to the University and consult with the instructor in charge as to their fitness to undertake the work.

No university credit will be given in the special technique courses except to students majoring or minoring in Physical Education.

Major

Students regularly entered in the College of Letters and Science electing their major in Physical Education are required to take courses 20 for four years, 56, 59, 62, 63, 67, 107 (Physiology 116), 108, 114, courses 21-50 (at least four credits) and thesis (4 credits) a total of 32 credits; Physical Education 16 or Education A; Education 1 or 6 or 11 or 41, Anatomy 121, Physiology 114, and 105 or 115 and satisfy prerequisites in biology, chemistry, and psychology, or their equivalents. Additional credit in Physical Education may be secured in courses 16, 55, 107, 66, 68, and 21-50.

Minor

The requirements for a minor are designed especially for students preparing to teach some other subject in the schools and assist in physical education.

Students electing Physical Education as a minor subject must take courses 20 for at least two years, 59 or 107, 67 (2 credits) and 16 and 21-50 for four credits, a minimum of 10 credits. Additional credits may be secured in courses 56, 66, and 21-50. Prerequisites are Zoology 1a or 1b or Physiology 1 and 2, Philosophy 1, and Elementary Education at least 3 credits.

State Teachers Certificate

Graduates majoring in Physical Education will be entitled to receive the state teachers certificate offered in the Course for the Training of Teachers, page 262, by fulfilling the requirements in Physical Education and 6 hours in Education.

They will also be entitled to a special state certificate given by the State Board of Examiners.

COURSES OF INSTRUCTION

Abbreviations in the announcement of courses: Yr., throughout the year; I, given during the first semester; II, given during the second semester; I or II, given each semester; cr., credits, i. e., hours of credit. Unless otherwise stated, the number of credits per semester is given.

For all Students

1. **Developmental Exercises.** 1 or 2 cr. Prescribed for all freshmen and such sophomores as have not attained the requisite development. Men, two hours; women, four hours weekly.

2. **Advanced Exercises.** 1 to 4 cr. Systematic courses in athletics—track and field events, cross country running, baseball, basketball, football (intercollegiate, soccer), tennis, field hockey, etc.; aquatics—swimming, rowing, water polo, diving, life saving; gymnastics—advanced apparatus exercises, gymnastic, folk, and esthetic dancing, tumbling; wrestling, fencing, and boxing. The

work of the various class and varsity teams is included in this course. Open to all students who have attained the required degree of organic power and bodily skill. Prescribed for sophomores who have completed course 1. Prerequisite: course 1 or its equivalent.

3. Special Corrective Exercises. 1 or 2 cr. Required of all freshmen and sophomores unfitted to take courses 1 and 2.

4. Efficient Living. The laws of personal and general hygiene. Given with course 1.

The work in courses 1, 2, 3, 4, and 20 is differentiated for the men and women according to their respective natures and needs.

Fall	Winter	Spring
1. Baseball 5. Cross country running 8. Field hockey 9. Football 13. Rowing 15. Soccer 16. Swimming 17. Tennis 18. Track and field	2. Basketball 3. Boxing 6. Dancing 7. Fencing 10. Gymnastics 11. Handball 12. Ice hockey 13. Rowing 14. Skating* 16. Swimming 18. Track and field 19. Tumbling 20. Water polo 21. Wrestling	1. Baseball 4. Canoeing 8. Field hockey 9. Football 13. Rowing 15. Soccer 16. Swimming 17. Tennis 18. Track and field

*Part season only and according to weather. May be elected only in connection with some other sport.

For Professional Students

19. Practice Teaching. Cr. to be arranged. Mr. Hetherington and Miss Trilling.

20. General Technique. a. Men. b. Women. For professional students. The practice course for students majoring or minoring in Physical Education. Parallel to courses 1 and 2, including in addition, instruction in nomenclature, elementary organization of material, methods of leading sections and squads, and practice leading in courses 1 and 2. The course covers four years for major and two years for minor students.

21-50. Special Organization and Methods. Cr. to be arranged. Special studies of the more complex activities used in physical education, from the standpoint of leadership, instruction, training, and special management. Each activity includes lectures, demonstrations, practice, and practice teaching as may be assigned. Prerequisites: Personal skill in the performance of each activity, acquired in course 20 or its equivalent.

Men.

21. Gymnastics (tactics, calisthenics, apparatus, tumbling).
22. Plays and games including tennis and handball. 23. Basketball.
24. Track and field. 25. Swimming and boating. 26. Dancing (men and boys). 27. Baseball. 29. Football—American. 30. Soccer, field hockey, and ice hockey. 34. Boxing, fencing, and wrestling.

21, 22, 23, 24 required for major or certificate.

Women.

41. Gymnastics (tactics, calisthenics, apparatus). 42. Plays and games. 43. Folk dancing. 44. Basketball and field hockey. 45. Swimming and boating. 46. Advanced folk and esthetic dancing. 47. Baseball and track and field. 48. Rowing. 50. Fencing, archery, and tennis.

41, 42, 43, 44 required for major or certificate.

16. **First Aid to the Injured.** I; 1 cr. Mr. Elsom.

55. **History of Physical Education.** II; 2 cr. Mr. Elsom.

56. **Kinesiology.** II; 2 cr. Prerequisites: course 20 and Anatomy 121. Mr. Hetherington.

107. **Physiology of Exercise (Physiology 116).** I; 3 cr. Prerequisites: course 56 and Physiology 105 or 115. Mr. Eyster, Mr. Dawson, Mr. Meek.

108. **The Principles of Physical Education.** II; 3 cr. Prerequisites: Zoology 1a and 1b, Physiology 1 and 2 or 105 or 115, and Philosophy 1. Mr. Hetherington.

59. **Nature, Function, and Organization of Play.** I; 3 cr. Prerequisite: Philosophy 1. Mr. Hetherington.

62. **Growth and Development.** I; 2 cr. Growth and development of tissues and organs in relation to organic and neuro-muscular education. Prerequisites: Zoology 1a and 1b or Physiology 1 and 2 and Philosophy 1. Mr. Hetherington.

114. **Medical Examinations.** II; 3 cr. (Clinical Medicine 101). Prerequisites: Anatomy 121 and Physiology 105 or 115. Mr. Evans.

63. **Physical Examinations and Gymnastic Therapeutics.** Yr.; 2 cr. Prerequisites: Anatomy 121 and Physical Education 56. Either preceded by or taken in conjunction with Physical Education 107 and 114. Mr. Elsom, Miss Lippitt.

66. **The Management or Practical Conduct of the Playground.** I; 1 cr. Prerequisite: course 59. Must be accompanied by course 22 or 42. Mr. Meanwell.

67. **Principles of Teaching and Adaptation.** Yr; 2 cr. 1st semester: The psychology of leadership, coaching, etc. 2nd se-

mester: Principles of selection, evolution and adaptation of motor activities to individuals and groups, differentiated by sex and age. Minors may take the first semester alone. Prerequisites: courses 20 and 59, or 107 and for the second semester 56 and 107. Mr. Hetherington.

68. Organization and Administration of Physical Education. I; 3 cr. Prerequisites: courses 20, 59, 67, and 108. Mr. Hetherington.

70. Educational Athletics. I; 1 cr. Values; analysis of evils and origins; problems in the successful organization for the masses. Prerequisite: course 59 or 108. Mr. Hetherington.

71. Scouting and Other Adolescent Organizations. Theory and Practice. II; 2 cr. Adolescent tendencies; the theory of scouting and adolescent organizations; the programs of activities and their educational values. Prerequisites: Philosophy 1, and Physical Education 59, or 3 cr. in education or sociology. Mr. Elsom.

130. Public Recreation. II; 2 cr. Custom in recreation, social changes and the new attitude; the needs of different classes of people; the effects of activities and the agencies in the organization of recreation. Prerequisite: Physical Education 59, or 3 cr. in education or sociology. Mr. Hetherington.

MILITARY SCIENCE AND TACTICS

MAJOR CHARLES F. CRAIN, 37TH INFANTRY, U. S. A., PROFESSOR OF MILITARY SCIENCE AND TACTICS, COMMANDANT; 1ST LIEUT. WILLIAM J. FITZMAURICE, INFANTRY, U. S. A., ASSISTANT PROFESSOR OF MILITARY SCIENCE AND TACTICS, ASSISTANT COMMANDANT.

The object of the military instruction is to qualify students for the performance of the duties of commissioned officers, should their services be needed by the country. The instruction is necessary in order to prepare them to perform these duties intelligently and enables them to be thus trained with the least practicable interference with their civil careers. It is hoped that by this system there may be in time of national emergency a sufficient number of educated men, trained in military science and tactics, to officer and lead intelligently the units of the large armies upon which the safety of the country will depend.

The courses are required for freshmen and sophomores, and elective for juniors, seniors, graduate students, and those who have received courses of training at other schools substantially equivalent to that prescribed for freshmen and sophomores here. As the object of the training is to bring the largest possible number of students up to the proper standard of proficiency, and as the work is required by the rules of the University, exemptions, or permissions to be absent, except for physical disability, cannot be accorded to freshmen and sophomores, and any student who is absent from any part of the instruction will be required, subsequently, to make up the omitted training before being credited with the number of units necessary for graduation.

The courses provide the ground work upon which to build military character and proficiency, and are designed to develop the greatest possible initiative on the part of the student. They also provide that the cadet officers and noncommissioned officers shall participate in the administration and training and share the responsibility therefor.

University fees amounting to ten dollars each semester will be refunded to all cadets who elect to take drill as commissioned officers after having completed the required course. An additional prize of fifty dollars will be paid to the cadet colonels and lieutenant colonels and twenty-five dollars to each major. These officers will act as assistant instructors in military science and tactics.

Upon graduation, especially qualified students receive from the Governor of Wisconsin commissions as brevet second lieutenants in the National Guard of Wisconsin, subject to assignment to duty for five years after graduation.

Institutions whose students have exhibited the greatest application and proficiency in military training and knowledge during the academic year are designated annually by the War Department as "distinguished colleges and honor schools." The University of Wisconsin having been thus designated for the years 1915 and 1916, is authorized to recommend ten Honor Graduates of the Department for appointment as second lieutenants in the United States Army.

All male freshmen and sophomores are required to report to the Commandant in person during the registration period. They will then be assigned to companies and should, at this time, present any excuse which may operate to exempt them from drill or necessitate its deference.

Students may be excused from or defer drill on the following grounds only, all requests for exemptions and postponements being decided by the Commandant.

I. Exempt from Drill and Recitations

1. Foreigners not desiring to become citizens.
2. Physically unfit, on medical certificate from the Department of Clinical Medicine of this University.
3. Short Courses, Collège of Pharmacy, Agriculture, etc.
4. Normal School graduates and those who enter the University with college work sufficient to give them junior rank in the Collège of Letters and Science, and other colleges with similar entrance requirements.
5. Those holding honorable discharges from the United States Army, Navy, or Marine Corps.

II. Excused from Drill or Recitation Under Policy of the Department on Authority of the Commandant

1. Students from accredited military schools or the National Guard. Proper credentials must be presented to show actual performance of duty and that the course covered elsewhere equals that given here.

2. Adult special students over 23 years of age not intending to graduate.

III. Deferring but required to make up in the Department

1. Self-supporting students where the hours of labor actually conflict with drill hours.

2. All cases not falling under any of those previously mentioned.

Both drills and recitation courses begin at the opening of the semester. Drills will be held three hours a week. This regulation applies to both freshmen and sophomores.

All students must provide themselves with the cadet uniform as prescribed by and furnished through the Military Department. The uniforms are obtained by the University Purchasing Department under contract and furnished to the students at actual cost price. The deposit of approximately \$20 must be paid to the Bursar by all male students eligible for drill entering for the first time. To students exempted from drill under group I and, under certain sections of group II, a refund will be made as soon as the status of the student is determined. This can be done only at the office of the Commandant.

At the date on which this catalog goes to press, it is very probable that the Reserve Officers' Training Corps will be adopted by the University. If this new system is in effect, the U. S. government will furnish necessary uniforms and the deposit of \$20 mentioned above will be refunded to the student upon his severing his connection with the military department, provided he returns his uniform uninjured except by reasonable wear. There will also be certain financial and other advantages to those taking the elective course. Definite information on these points will be posted on the department bulletin boards.

Required Courses

For Freshmen

1. **Military Art.** Yr.; 1 cr. Three hours a week.

(a) Practical, on campus and in armory.

Physical drill; infantry drill to include schools of soldier, squad, company, and battalion in close and extended order; fire direction and control; ceremonies; tent pitching; bayonet combat; intrenchments; sighting, position and aiming drills; gallery practice; nomenclature and care of rifle and equipment; first aid. Cadet Officers.

(b) Theoretical. Lectures and classroom work.

Theory of target practice, individual and collective; use of landscape targets; military organization; map reading; service of security and information; personal hygiene; camp sanitation for small commands; principles of combat; general military policy of the United States, Infantry Drill Regulations to include the school of the company. Regular Army Instructors and Cadet Officers.

For Sophomores

2. **Military Art.** Yr.; 1 cr. Three hours a week.

Prerequisite: Military Art 1.

(a) Practical, on campus and in armory.

Review and perfection of practical work begun in freshman year; collective combat firing on indoor ranges; signaling; work with sand table by constructing intrenchments, fieldworks, obstacles, bridges, etc.; comparison of ground forms with terrain as represented on map. Regular Army Instructors and Cadet Officers.

(b) Theoretical. Lectures and classroom work. Map reading; camp sanitation and camping expedients; marches and camps; military history, Infantry drill regulations to include school of battalion and combat; small-arms firing regulations; small tactical problems covering patrolling, advance, rear, and flank guards; trench and mine warfare; orders and messages. Regular Army Instructors and Cadet Officers.

Elective Courses

For those who have completed Military Art 1 and 2 and who are appointed officers or noncommissioned officers.

3. **Military Art.** Yr.; 1 cr. Three hours a week.

(a) Practical. Duties consistent with rank as cadet officers and noncommissioned officers in connection with practical work for sophomores and freshmen; military sketching.

(b) Theoretical. Duties as instructors in theoretical courses for sophomores and freshmen; minor tactics; map maneuvers; company administration; property accountability; method of obtaining supplies and equipment; military history; elements of international law; court-martial proceedings; psychology of war; rifle in war. Regular Army Instructors.

4. Military Art. Yr.; 1 cr. Three hours a week.

Practical and Theoretical. A continuation of Military Art 3 with additional responsibilities and opportunities to develop initiative and leadership. Regular Army Instructors and Cadet Officers.

WASHBURN OBSERVATORY

GEORGE C. COMSTOCK, DIRECTOR AND PROFESSOR OF ASTRONOMY;
ALBERT S. FLINT, ASTRONOMER.

The Washburn Observatory was established in the year 1878 through the munificence of the late Gov. Cadwallader C. Washburn. Although its obligations and opportunities as a branch of a teaching university have not been ignored, the energies of its staff from the beginning have been directed mainly to astronomical research. Among the lines of research cultivated are the measurement of the positions and motions of the heavenly bodies, the discovery and measurement of double stars, with investigation of their orbits, the investigation of variable stars, the study of changes of latitude and the amount and character of the atmospheric refraction, the determination of the amount of the aberration of light, problems of stellar color, proper motions of faint stars, and a systematic investigation of the parallaxes of all accessible stars which have large proper motions.

The principal instruments of the Observatory are:

An equatorially mounted telescope of 40 centimeters aperture, constructed by Alvan Clark & Sons, and provided with graduated circles, driving clock, a filar micrometer, double image micrometer by Steinheil, a spectroscope, astro-photometer, and a very complete set of eyepieces; a meridian circle, by A. Repsold & Sons, of Hamburg, with collimators, transit micrometer, and the usual accessories of such an instrument. The objective of the instrument was made by the Clarks, and has an aperture of 12 centimeters and a focal length of 58 inches. The circle is graduated to 2 minutes of arc. For several years this instrument has been employed in an extensive series of determinations of stellar parallax. There are also a sidereal clock by Höwü, of Amsterdam, two meantime clocks by Howard, of Boston, a chronograph, by Fauth & Co., of Washington, and a printing chronograph by Gaertner.

In the Students Observatory are mounted an equatorial telescope, by Alvan Clark & Sons, of 15 centimeters aperture, and a

transit instrument of the broken telescope type, by Bamberg. These instruments, while primarily intended for instruction, are well adapted to and are employed for certain classes of original work. In particular, the equatorial telescope has been provided with reflecting prisms (Loewy), and employed as one of the principal instruments of the Observatory in an investigation of the refraction and the constant of aberration. The Bamberg instrument is used for latitude determinations by the Talcott method and for the time service of the Observatory. The Observatory also possesses a considerable number of subsidiary instruments, such as portable telescopes, spectroscopes, photometers, chronometers, sextants, engineers' transits, an altazimuth, a universal instrument of the German type, a personal equation machine, a spherometer caliper, seismoscopes, photographic apparatus, and a complete set of meteorological instruments.

The Woodman Astronomical Library, established in connection with the Observatory, and supported from the income of a fund given by the late Cyrus Woodman, possesses a large and valuable collection of works upon astronomy and kindred subjects.

By provision of law the results of important investigations conducted at the Washburn Observatory are published by the state, and under this provision twelve volumes, representing the more important work done at the Observatory, have been issued.

Students of sufficient technical attainments are admitted to the Observatory and take part in the investigations in progress. Meritorious original work of such students may be included in the Publications of the Observatory, or in the Bulletins of the University. For the courses of instruction in Astronomy see Index, under Astronomy.

UNITED STATES WEATHER BUREAU OFFICE

ERIC R. MILLER, OFFICIAL IN CHARGE.

The local office of the United States Weather Bureau is located at the University as a result of the policy of the University to cooperate with the scientific branches of the Federal Government, a policy that is also expressed in its association with the Agricultural Experiment Station, the Forest Products Laboratory, the Geological Survey, etc. The official in charge gives instruction in meteorology in the College of Letters and Science, information regarding which will be found in another part of this catalogue.

The office, where the recording apparatus is in operation, is in room 84, North Hall. The exposed apparatus is mounted on the roof of the same building. The equipment includes eye-reading apparatus for measuring the pressure, temperature, and humidity of the air, the rainfall, the direction and velocity of the wind, the duration and intensity of sunshine, and the polarization of sky light, and automatic registers for continuously recording the majority of these elements.

Meteorological observations were made at Madison between 1853 and 1864 by Professors S. H. Carpenter and J. W. Sterling at the University, and Dr. A. Schue at his office on Main Street. From January 1869 to October 1878 they were carried on by Prof. W. W. Daniels at the University. The Signal Corps, United States Army, maintained an observing station in Madison from October, 1878 to April, 1883, and from May, 1883 to September, 1904, the observations were made at the Washburn Observatory. The present office was established in September, 1904, and has continued the series of observations since that time. All of these records are now on file in the Weather Bureau office, where they may be consulted. The office also has reports and publications relating to the weather and climate of the United States and other countries and is prepared to furnish information regarding them.

The office receives telegraphic reports from similar offices distributed over the United States and Canada, at 7 A. M. and 7 P. M. and prepares and distributes to the press and the public in central and southwestern Wisconsin the daily weather map, the weather forecast, and other weather information. The office is open to the public from 9 A. M. to 4 P. M. daily, except Sundays and holidays.

FOREST PRODUCTS LABORATORY

MR. WEISS (chairman); MR. ACREE, MR. HUMPHREY, MR. KRESS, MR. NEWLIN, MR. TEESDALE, MR. TIEMANN, MR. BATEMAN, MISS GERRY, MR. HAWLEY, MR. SCHORGER.

General Statement

The Forest Products Laboratory is an institution of practical research conducted by the Forest Service, United States Department of Agriculture, in cooperation with the University of Wisconsin, for the purpose of studying problems bearing on the most efficient use of the products of the forest and for disseminating such knowledge. The staff of the laboratory cooperates with that of the University of Wisconsin in the courses of lectures and researches outlined below. The laboratory offers unusual facilities for research in the field of forest products and possesses very complete scientific and technical equipment for this purpose. In its investigations it approximates closely commercial conditions and cooperates extensively with the various manufacturing establishments in testing out its researches on a commercial basis. The technical sections of the laboratory are as follows: (1) Timber Physics. The physical, histological, and morphological properties of wood, including the theory and practice of kiln drying. All work of the United States Government on the identification of woods is also done in this section. (2) Timber Tests. Investigations on strength, stiffness, hardness, and other mechanical properties of commercial woods; the strength of various products made from wood, such as spokes, shafts, barrels, and boxes; the efficiency of wooden joints and fastenings. (3) Wood Preservation. The composition, properties, and efficiency of various wood preservatives and the processes used in applying them. Researches in decreasing the inflammability of wood. (4) Derived Products. Researches on the methods of production and utilization of by-products, such as ethyl and methyl alcohol, turpentine, rosin, acetates, etc., ob-

tained from various forms of wood and wood waste. (5) Pulp and Paper. Researches with various woods to determine their fiber qualities and value for pulp and paper. (6) Pathology. Researches on fungi which attack structural timbers, with investigations aimed at practical means of prevention. The section of pathology is maintained by the Bureau of Plant Industry.

The lectures and research are offered by the staff of the laboratory to both undergraduates and graduates, who may choose one of the problems as major work for a thesis for the degree of Bachelor of Arts or of Science, Master of Arts, or of Science, or Doctor of Philosophy. A short laboratory course involving work on sugars, celluloses, terpenes, preservatives, waste products, and industrial problems is given as a minor. A number of investigations involve cooperation with the Departments of Chemistry, Agricultural Chemistry, Engineering, Chemical Engineering, Botany, and others in the University of Wisconsin. When a research problem is assigned as a major subject by one of the staff the minor lecture and laboratory courses can be chosen to suit the particular needs of the student, provided this conforms with the regulations of the University. The object of this work is to enable men to acquire thorough scientific and practical training in organic chemistry and wood technology and to apply this knowledge in scientific and commercial operations and investigations in the wood-using industries, and in teaching.

A meeting of the entire technical staff is held in the laboratory on each Saturday morning for the discussion of scientific and technical literature, recent discoveries, and other points of interest. Special seminars are also held by the various technical sections.

Student Research Assistantship

Students who show unusual ability in research may be appointed as student research assistants in this laboratory by the Forest Service or by the Bureau of Plant Industry, in accordance with the regulations of the United States Civil Service Commission. The salary will not exceed \$300 per year; tuition and laboratory fees will be remitted. Application for these assistantships must be made to the director of the Forest Products Laboratory. The number of students thus appointed will largely depend upon the funds available and the number of problems taken up by the laboratory for solution.

Lecture and Laboratory Courses

A general course on forestry and utilization (101) is given during the first semester and is open to any student. This is followed in the second semester by a technical course in wood technology (102) and one on structural timbers (110) which are adapted particularly to junior, senior, and graduate engineers. Four lecture courses in chemical subjects are arranged as a series extending over two years. A laboratory course involving work on sugars, celluloses, terpenes, preservatives, waste products, and industrial problems is given as an elective. A course in pathology of wood is given in cooperation with the Department of Plant Pathology during the second semester to undergraduates and graduates.

CHEMISTRY OF FOREST PRODUCTS

PROFESSOR ACREE (chairman); **LECTURERS BATEMAN, HUMPHREY, KRESS, HAWLEY, SCHORGER.**

For Graduates and Undergraduates

103. Industrial Chemistry Applied to Forest Products. II; 2 cr. Pulp and paper, wood preservation, tanning, wood distillation, the production of alcohols from wood waste, naval stores, and other industries. Prerequisites: Chemistry 120 and 121. Mr. Bateman, Mr. Kress, Mr. Hawley, Mr. Schorger.

104. Celluloses and Their Constituents. I; 3 cr. Their reactions and configurations; technical processes involved in their manufacture. Prerequisites: Chemistry 120 and 124. (Given 1916-17.) Mr. Acree.

111. Pulp and Paper Technology. II; 1 cr. The basic principles underlying the manufacture of mechanical, soda, sulphite, and sulphate pulp and the technology of paper making. Illustrated by samples and lantern slides. Open to Engineering seniors and graduates. Mr. Kress.

For Graduates

208. Research in Forest Products Chemistry. Yr.; hours to be arranged.

- A. Coal tars, wood tars, and wood preservatives. Mr. Bateman.
- B. The production of ethyl alcohol from wood waste; tannins, and fermentation. Mr. Hawley.
- C. Wood distillation and wood extraction. Mr. Hawley.
- D. Carbohydrates and terpenes. Mr. Schorger.
- E. The chemical action of bacteria and fungi on carbohydrates. Mr. Humphrey.
- F. Sugars, dyes, and physical-organic chemistry. Mr. Schorger.
- G. Pulp and paper. Mr. Kress.

FORESTRY AND WOOD TECHNOLOGY

LECTURERS TIEMANN (chairman), GERRY, HUMPHREY, KOEHLER, NEWLIN, TEESDALE.

For Graduates and Undergraduates

101. Forestry and Utilization of Wood. I; 2 cr. General forestry, including outdoor studies in the identification of trees, physiography, relation of forests to conservation of natural resources, the work of the United States Forest Service, properties and uses of wood. Mr. Tiemann.

102. Wood Technology. II; 2 cr. Structure and identification of woods, physical and mechanical properties, kiln drying, wood preservation. Primarily for junior, senior, and graduate engineers. Mr. Tiemann, Mr. Newlin, Mr. Teesdale, Mr. Koehler.

110. Structural Timbers. II; 1 cr. Identification, preservation, mechanical properties, grading rules, and building codes. Course will not be given unless attended by at least five students. Prerequisite: Mechanics 3 and 4. Mr. Newlin, Mr. Koehler, Mr. Humphrey.

SPECIAL LECTURES

Given to supplement regular courses in the University of Wisconsin.

In the Department of Botany

110. Plant Histology. Two lectures on wood structure. Miss Gerry.

115. Histology of Woods. Four lectures on the minute structure and characteristics of the wood of important forest trees. Miss Gerry, Mr. Tiemann.

2. Elementary Morphology and Physiology. Three lectures giving a broad discussion of woody tissue and how it differs from lower plant forms and herbaceous stems. Miss Gerry.

IN THE DEPARTMENT OF MANUAL ARTS

4. Elementary Bench Woodwork. Five lectures on the physical properties of wood and wood structure. Mr. Tiemann, Miss Gerry.

5. Furniture and Cabinet Design and Construction. Three lectures on the theory and practice of kiln drying. Mr. Tiemann.

10. Wood Finishing. One lecture on the structure, development, and significance of tyloses. Miss Gerry.

IN THE DEPARTMENT OF RAILWAY ENGINEERING

103. Railway Maintenance. Three lectures on the preservation of structural timbers as applied to railroad requirements. Mr. Teesdale.

IN THE DEPARTMENT OF ROADS AND PAVEMENTS

102. Roads and Pavements. Two lectures on the construction of wood block pavements. Mr. Teesdale.

IN THE DEPARTMENT OF AGRICULTURAL ENGINEERING

1. **General Agricultural Engineering.** One lecture on practical methods of preserving farm timbers. Mr. Teesdale.

IN THE DEPARTMENT OF MECHANICS

52. **Materials of Construction.** One lecture on factors influencing the working stresses and grading of timber. Mr. Newlin.

IN THE UNIVERSITY EXTENSION DIVISION

Several lectures on various technical activities of the Forest Products Laboratory will be given. More specific announcements to be made by the Extension Division. Mr. Koehler.

SUMMER SESSION

SCOTT H. GOODNIGHT, DIRECTOR.

Duration of the Session

The nineteenth Summer Session of the University of Wisconsin opens June 25, 1917. The session lasts six weeks and closes August 3, except in the Law School, where the session continues ten weeks and ends August 31.

Classes of Courses

Courses, both academic and professional, are offered for graduates and for undergraduates in arts, law, engineering, and agriculture, for teachers in colleges, agricultural schools, high schools, and technical schools, and for special students, as lawyers, doctors, and practicing engineers. Practically all the courses carry full academic credit. All the library, laboratory, and other facilities of the University are available during the summer, and the opportunities for thesis and advanced investigative work are particularly favorable at this time.

Terms of Admission

The requirements for graduates and undergraduates who desire university credit are the same for the Summer Session as for the other sessions of the University. (See page 89 of this catalogue.)

All persons, however, who desire to share in its advantages may be enrolled in the Summer Session without passing the entrance examination. They are freely admitted to all courses as auditors, and are permitted to elect work in the courses for which they are qualified. Credit toward a degree will be given, however, only to students who satisfy the entrance requirements of the University.

Credits for Summer Session Work

A student in any of the colleges may receive for the session of six weeks a maximum of six credits. In the Law School (ten weeks) the maximum is eight credits. Credit toward all degrees may be earned in the summer session. Candidates who expect to offer for graduation the minimum of thirty credits must spend two semesters in residence; those who expect to offer forty-five or more credits earned in residence, may earn all or any part of them in summer session.

A special method of obtaining the master's degree by part summer session and part *in absentia* work is described on page 387 of this catalogue.

Fees and Registration

The general fee for the Summer Session, irrespective of the number of courses taken, is \$15 for six weeks and \$25 for ten weeks. Those who attend merely as visitors pay the same fee as other students.

Registration must precede entrance upon any part of the work of the session. Registration takes place Saturday, June 23, and Monday, June 25, at the office of the Registrar, 158 University Hall.

Graduate School (six weeks).....	\$15 00
Letters and Science (six weeks).....	15 00
Engineering (six weeks).....	15 00
Agriculture (six weeks).....	15 00
Law (ten weeks).....	25 00
Field courses, geology, surveying, farm management (four weeks).....	10 00
Students remaining beyond the regular summer session, additional fee, per week.....	2 50

The laboratory fees are proportionate with those paid in the long session. For example, the laboratory deposit for a course in chemistry is \$10, with a refund determined by the amount of materials used and of breakage, if any; the fee for the course in human dissection is \$10. The shop and laboratory fees in the College of Engineering are \$2 per credit. All fees are payable at the time of registration.

GRADUATE SCHOOL, COLLEGE OF LETTERS AND SCIENCE

ART

PROFESSOR W. T. PHILLIPS (Winnipeg, Man.)

1. Renaissance Art, 2 cr.; 2. Landscape Painting, 2 cr.

ASTRONOMY

PROFESSOR COMSTOCK.

- 1S. General Astronomy, 2 cr.

BOTANY

PROFESSOR ALLEN; ASSISTANT PROFESSOR BARTHOLOMEW; INSTRUCTORS BAIRD, BENNETT, SMITH; ASSISTANTS FREY, RICHARDS.

1. General Botany, 3 cr.; 90. Teaching of Botany, 1 cr.; 104. Morphology of Fungi, 3 cr.; 106. Morphology of Seed Plants, 3 cr.; 130. Classification of Seed Plants, 2 cr.; 138S. Native Trees and Shrubs, 1 cr.; 146. Plant Physiology, 4 cr.; 156. Problems of Heredity, 1 cr.

CHEMISTRY

PROFESSOR LENHER; ASSOCIATE PROFESSOR WALTON; ASSISTANT PROFESSORS KRAUSKOPF, MATHEWS; INSTRUCTORS ELLINGSON, JOHNSON; ASSISTANTS BISHOP, CLEVELAND, SCHIERZ.

1. General Chemistry, 2 or 4 cr.; 1S. Qualitative Analysis, 2 or more cr.; 5S. Teaching of Chemistry, 1 cr.; 11S. Quantitative Analysis, 3 or more cr.; 108S. Advanced Qualitative Analysis, 2 or more cr.; 112S. Advanced Quantitative Analysis, 2 or more cr.; 120S. Organic Chemistry, 2 or more cr.; 130S. Physical Chemistry, 2 or more cr.; 133S. Photography and Its Scientific Applications, 2 cr.; 251S. Advanced Inorganic Chemistry, 1 cr.; 260S. Chemical Research, cr. according to work done.

EDUCATION

PROFESSORS HENMON, HILL, O'SHEA, SHARP; SUPERINTENDENT OF SCHOOLS MEEK (Austin, Texas); DEAN MATHEWS; ASSISTANT PROFESSORS MILLER, SEYBOLT, STARCH.

1. History of Modern Education, 2 cr.; 2S. The High-School Recitation, 2 cr.; 11. Mental Development, 2 cr.; 41. Educational Psychology, 2 cr.; 103. History of American Education, 2 cr.; 106. The Administration of Public Education, 2 cr.; 108S. High-School Organization, 2 cr.; 109. School Supervision, 2 cr.; 144. Advanced Educational Psychology, 2 cr.; 145. Educational Measurements, 2 cr.; 149S. Moral Education, 2 cr.; 190S. College Administration for Women, 1 cr.; 209. Concrete Problems in School Control, 2 cr.; 235S. Research in Educational Administration, 2 cr.; Vocational Education and Guidance (See Manual Arts 113).

ENGLISH

PROFESSOR HUBBARD; ASSOCIATE PROFESSORS LATHROP, PYRE; ASSISTANT PROFESSORS CAIRNS, GARDNER, PENDLETON; INSTRUCTORS ALDERMAN, BONNELL, BURD, CHASE, EMSLEY, HARKNESS, WANN.

A. Sub-Freshman English, no cr.; 1a. Freshman English (1st sem.) 3 cr.; 1b. Freshman English (2nd sem.), 3 cr.; 6S. Advanced Composition, 2 cr.; 8S. Contemporary Poetry, 2 cr.; 30. General Survey, 3 cr.; 35. Victorian Era, 2 cr.; 37S. Shakspeare, 2 cr.; 50a. The Teaching of Composition, 2 cr.; 50b. The Teaching of Literature, 2 cr.; 123. Modern English Grammar, 2 cr.; 144S. Shelley, 2 cr.; 149S. American Literature (Short Story), 2 cr.; 156S. Literary Criticism, 2 cr.; 214S. Hamlet, 2 cr.; 215S. Wordsworth, 2 cr.; 216S. Emerson, 2 cr.; 217S. Browning, 2 cr.

FESTIVALS AND PAGEANTRY

PROFESSOR GORDON (Winfield, Kan.)

1. Dramatics and the School Festival (Introductory), 2 cr.;
2. The Festival and Pageant Movement, 2 cr.

GEOLOGY AND GEOGRAPHY

PROFESSOR WHITBECK; ASSOCIATE PROFESSOR MARTIN; ASSISTANT PROFESSOR STEIDTMANN.

1S. Elementary Geology, 2 cr.; 2S. Rocks and Minerals, 2 cr.; 5S. Commercial and Industrial Geography, 2 cr.; 10S. Physical and Applied Geography, 2 cr.; 102S. Geography of South America, 2 cr.; 104S. Geography of Wisconsin, 1 cr.; 109S. Glaciers and Glaciation, 1 cr.; 131. Summer Field Course, 4 to 6 cr.

GERMAN

PROFESSOR HOHLFELD; ASSOCIATE PROFESSORS FEISE, GOOD-NIGHT, ROEDDER; ASSISTANT PROFESSORS DEIHL, KELLER; INSTRUCTORS ARON, CAST, HOLLANDER.

1a. First Semester German, 4 cr.; 1b. Second Semester German, 4 cr.; 2a. Third Semester German, 4 cr.; 2b. Fourth Semester German, 4 cr.; 40. Conversation, 1 cr.; 16. Modern Prose, 2 cr.; 17. Modern Drama (Soph. Read.), 2 cr.; 10. Composition and Grammar Review, 2 cr.; 50S. The Modern "Novelle" (Junior elect.), 2 cr.; 29. German Art, 1 cr.; 112. Advanced Practice, 2 cr.; 114a. The Teaching of German, 2 cr.; 114b. Phonetics (Teachers' Course), 1 cr.; 131. Survey of Literature (800-1600), 2 cr.; 151. Middle High German, 2 cr.; 137. Schiller, 2 cr.; 154. Gothic, 1 cr.; 233. The Classical Novel, 1 cr.; 269. Philological Proseminary (Meier Helmbrecht), 1 cr.; 248. Literary Seminary (Modern German Drama), cr. according to work done.

GREEK

PROFESSOR SMITH.

5a. Elementary Greek, 2 cr.; 7. Xenophon, Homer, Plato, or Euripides, 1 cr.; 106. Advanced Reading Course, 1 cr.; 113b. Greek Drama in English Translation, 1 cr.

HISTORY

PROFESSORS BOAK (University of Michigan), FISH, SELLERY, WAY (Beloit College); ASSOCIATE PROFESSORS CHASE, ROOT; ASSISTANT PROFESSOR COFFIN.

10S. History of Greece to the Roman Conquest, 2 cr.; 1a. Medieval History (395-1095), 2 cr.; 4. United States, 1830 to Present, 2 cr.; 123S. History of the Roman Empire from Augustus to Justinian, 2 cr.; 131. Medieval Civilization, 2 cr.; 117. American Constitutional History, 2 cr.; 112. Representative Men, 2 cr.; 138. Revolutionary and Napoleonic Epochs, 1789-1815, 2 cr.; 139. History of Europe, 1815-1915, 2 cr.; 150. Teaching of History, 2 cr.; 151. Supplementary Reading for Teachers of History, 2 cr.; 251. Seminary in Colonial History, 2 cr.; 261. Seminary in American History, 2 cr.

JOURNALISM

LECTURER EVANS (University of Kansas); INSTRUCTOR BING.

102S. Newspaper Reporting, 2 cr.; 105. Special Feature and Magazine Writing, 2 cr.; 106S. Short Story Writing, 2 cr.; 120S. The Teaching of Journalism, 1 cr.

LATIN

PROFESSOR SHOWERMAN; ASSISTANT PROFESSORS ALLEN, SABIN; ASSISTANT DOE.

1. Elementary Latin, 4 cr.; 2. Prose composition, 1 cr.; 3. Virgil, 2 cr.; 6. Cicero, 2 cr.; 10. Classical Mythology, 1 cr.; A11. Oral Latin, 1 cr.; 109. Latin Comedy, 1 cr.; 116. Teaching of Latin, 2 cr.; 233. Seminary, 2 cr.

LIBRARY SCHOOL

MISS HAZELTINE and Staff.

1. Course for Teacher Librarians, 6 cr.

MANUAL ARTS

PROFESSOR CRAWSHAW; ASSOCIATE PROFESSOR CORP; ASSISTANT PROFESSORS BLACK, KEOWN, MILLAR, ORTH, VARNUM; LECTURER JONES (Somerville, Mass.); SUPERINTENDENT GODDARD; INSTRUCTORS BRUNSELL, CHISHOLM, DIAMOND, DABNEY, GRENOBLE, PAYTON, SCHMIDT, SCHUMANN, WILSON; ASSISTANT HOLMES.

1. Elements of Mechanical Drawing, 3 cr.; 2. Elements of Mechanical Drawing, 3 cr.; 3. Descriptive Geometry, 3 cr.; 4. Elementary Woodwork, 3 cr.; 5. Furniture and Cabinet Design and Construction, 3 cr.; 6. Wood Turning, 3 cr.; 6a. Pattern Making, 3 cr.; 6b. Advanced Pattern Making, 3 cr.; 7. Foundry Work, 3 cr.; 8. Forge Work, 3 cr.; 9. Machine Shop Work, 3 cr.; 10. Wood Finishing, 3 cr.; 12. Elementary Handwork, 3 cr.; 52. Methods. Public School Drawing and Design, 3 cr.; 60. Industrial Arts Design, 3 cr.; 70. Applied Design in Metal, 3 cr.; 24S. Industrial Handtool Metal Work, 3 cr.; 112. Teaching and Supervision of Secondary School Industrial Work, 2 cr.; 113. Vocational Education and Guidance, 1 cr.; 115. Seminary on Special Methods and Problems, 1 cr.; 15S. Architectural Drafting, 3 cr.; 16S. Advanced Architectural Drafting, 3 cr.; 17S. Machine Design for Teachers of Manual Arts, 2 cr.; 19S. Heating and Ventilating, 1 cr.; 20S. Gas Engine Operation and Testing, 3 cr.; 21S. Municipal Sanitation for Teachers of Manual Arts, 1 cr.; 22S. Cement and Elements of Masonry Construction, 3 cr.; 23S. Carpentry and Elements of Building Construction, 3 cr.; 25S. Problems of Administration for Continuation School Directors, 1 cr.

MATHEMATICS

PROFESSOR SLICHTER; ASSOCIATE PROFESSOR DOWLING; ASSISTANT PROFESSORS DRESDEN, HART; INSTRUCTORS PAINE, SIMPSON, TAYLOR; ASSISTANT MOORE.

1. Algebra, 2 cr.; 2. Trigonometry, 2 cr.; 4. Analytical Geometry, 2 cr.; 5. Calculus, 2 cr.; 6. Determinants, 1 cr.; 7. Commerce Algebra, 2 cr.; 8. Solid Geometry, 2 cr.; 10. Teachers' Course, 2 cr.; 52. Elementary Analysis, 5 cr.; 55. Calculus, 4 cr.; 110. Definite Integrals, 2 cr.; 112. Differential Equations, 2 cr.; 113. Mechanics, 2 cr.; 117. Theory of Functions, 1 cr.; 215. Calculus of Variations, 1 cr.; 241. Higher Geometry, 2 cr.; 252. Hydrostatics, 1 cr.

METEOROLOGY

MR. E. R. MILLER, of the U. S. Weather Bureau.

1. Weather and Climate, 2 cr.

MUSIC

PROFESSOR MILLS; LECTURER MORPHY (University of Illinois); ASSISTANT PROFESSOR TOWNSEND; MISS CRANE (Crane Normal and Training School, Potsdam, N. Y.); MR. ZANZIG (Ethical Culture School, New York); INSTRUCTOR CRANE.

1S. Harmony, Elementary, 2 cr.; 11S. Harmony, Advanced, 2 cr.; 21S. Counterpoint, 2 cr.; 33S. History and Appreciation of the Opera, 2 cr.; 41S. Public School Music Methods, Elementary, 2 cr.; 42S. Public School Music Practice, Elementary, 2 cr.; 51S. Public School Music Methods, Advanced, 2 cr.; 71S. Ear Training and Sight Reading, 1 cr.; 75S. Ear Training and Sight Reading, Advanced, 1 cr.; 81-2S. Pianoforte, 1 cr.; 82-2S. Voice Culture, 1 cr.; 78S. Community Music, 2 cr.; 89S. Practical Instrumentation, 1 cr.; 51 S. Seminary in Public School Music, 1 cr.; 45S. High School Music, 2 cr.; 150. Seminary, 1 cr.; Orchestra.

NORWEGIAN

INSTRUCTOR HOLLANDER.

1. Norwegian, 2 cr.

PHARMACY

INSTRUCTOR LANGENHAN.

20. Prescription Practice, 3 cr.; 121. Advanced Prescription Practice, 4 cr.; 30. Pharmaceutical Technology, 2 cr.; 45. Alkaloidal Assaying (Chemistry), cr. according to work done.

PHILOSOPHY

PROFESSORS HENMON, MCGILVARY, SHARP; ASSOCIATE PROFESSOR OTTO.

1S. Introductory Psychology, 2 cr.; 21S. Introduction to Philosophy, 2 cr.; 25. The Relation of Man to Nature, 2 cr.; 49. Moral Education, 2 cr.; 134S. The Philosophy of Josiah Royce, 2 cr.; 136S. British Philosophers of the Eighteenth Century, 2 cr.; 145S. Greek Ethics and Its Influence on Modern Ethical Theory, 2 cr.

PHYSICAL EDUCATION

ASSOCIATE PROFESSORS MEANWELL, TRILLING; ASSISTANT PROFESSORS ELSOM, JONES; INSTRUCTORS FORBES, GATH, H'DOUBLER, HINDMAN, MCCHESEY.

Courses marked * may not be taken for credit except by students majoring or minoring in Physical Education.

51S*. School Gymnastics and Games, 1 cr.; 52S. Social Games and Plays, 1 cr.; 54S. History and Introduction to Physical Education, 2 cr.; 57S. The Boy Scout Movement in Theory and Practice, 2 cr.; 60-61S. Physical Education in Elementary and Secondary Schools, 2 cr.; 66S. Playground Conduct and Management, 1 cr.; 71S. Principles of Coaching and Training, 1 cr.; 16*. First Aid to the Injured, 1 cr.; 20S. Play Hour, no cr.; 20bS. Recreation Hour, no cr.; 20ae and 20beS. Swimming (Men and Women), no cr.; 20agS. Baseball, no cr.; 20a1 and 20b1S. Tennis, no cr.; 21S*. Gymnastics for Men, 1 cr.; 22S*. Technique of Games, 1 cr.; 23*. Technique of Basketball, 1 cr.; 24*. Technique of Track and Field Events, 1 cr.; 25*. Technique of Swimming, 1 cr.; 26*. Gymnastic Dancing, 1 cr.; 27*. Technique of Baseball, 1 cr.; 29*. Technique of Football, 1 cr.; 41*. Gymnastics for Girls and Women, 1 cr.; 42*. Technique of Athletics and Games, 1 cr.; 43aS*. Singing Games and Elementary Folk Dancing, 1 cr.; 43bS*. Folk Dancing, Advanced, 1 cr.; 44*. Field Hockey, Basketball, Baseball for Girls, 1 cr.; 46aS*. Aesthetic Dancing, Elementary, 1 cr.; 46bS*. Aesthetic Dancing, Advanced, 1 cr.

PHYSICS

ASSISTANT PROFESSORS FULCHER, STEVE, TERRY; ASSISTANT PETERSEN.

1. General Lectures, 2 cr.; 1S. General Laboratory Practice, 1 cr. for each thirty hours of work performed; 2. Advanced Lectures on Light, 2 cr.; 3. Advanced Laboratory Practice in Light, 1 cr. for each thirty hours of work performed; 4. Advanced Lectures on Electricity and Magnetism, 2 cr.; 5. Advanced Laboratory Practice in Electricity and Magnetism, 1 cr. for each thirty hours of work performed; 8. Experimental Lectures for High School Teachers, 2 cr.; 115. Radioactivity and the Discharge through Gases, 2 cr.

POLITICAL ECONOMY, COMMERCE. SOCIOLOGY.

PROFESSORS GILLIN, GILMAN, ROSS, SCOTT; ASSOCIATE PROFESSOR ELWELL; INSTRUCTOR JEROME.

1S. Elements of Economics, 4 cr.; 5S. Money, 2 cr.; 8a. Elements of Accounting, 2 cr.; 11. Factory and Office Management, 2 cr.; 110. Investments, 2 cr.; 139. Social Psychology, 2 cr.; 147. Methods of Social Service, 2 cr.; 181. Theory and Practice of Accounting, 2 cr.; 201. Critics of the Classical Economists, 2 cr.; 258. Degeneracy and Society, 2 cr.; 260. Seminary on Cities, 2 cr.

POLITICAL SCIENCE

PROFESSOR LLOYD JONES; ASSOCIATE PROFESSOR HALL; ASSISTANT PROFESSOR CARPENTER.

2. Elementary Law, 2 cr.; 7. American Government and Politics, 2 cr.; 112. American Constitutional Law, 2 cr.; 122. Party Government, 2 cr.; 131. Latin American Institutions, 2 cr.; 136. American Diplomacy, 2 cr.

PUBLIC SPEAKING

ASSOCIATE PROFESSOR GAYLORD; ASSISTANT PROFESSORS BLANTON, HOUGHTON, JOHNSON; LECTURER WEAVER (Northwestern University).

15. Practical Public Speaking, 1 cr.; 8. Extempore Speaking, 1 cr.; 12S. Fundamentals of Vocal Expression, 2 cr.; 16S. Advanced Interpretative Reading, 1 cr.; 33S. High School Dramatics, 1 cr.; 21S. Voice Training, 1 cr.; 25S. Correction of Speech Defects, 2 cr.; 125S. Advanced Correction of Speech Defects, 2 cr.; 41S. Psychology of Reading and Speaking, 2 cr.; 43S. Teaching of Reading and Speaking, 2 cr.; 35S. Argumentation, 2 cr.; 36S. Speech Composition, 1 cr.; 37S. Debating, 1 cr.

ROMANCE LANGUAGES

PROFESSOR SMITH; ASSOCIATE PROFESSOR CERF; ASSISTANT PROFESSORS COOL, GAY, REED, ZDANOWICZ; INSTRUCTORS COUSINS, HAMILTON, LYON, SILVERCRUYS; ASSISTANTS BRADLEY, JENKINS.

1a. Beginners' French, 4 cr.; 1b. Second Semester French, 4 cr.; 13S. Intermediate Second Year French, 2 cr.; 14S. Advanced Second Year French, 2 cr.; 15. Elementary Conversation, 1 or 2 cr.; 16S. Intermediate French Conversation, 1 or 2 cr.; 17S. Grammar and Composition, 1 cr.; 18S. French Pronunciation, 2 cr.; 90S. The Teaching of French, 2 cr.; 120S. Advanced Conversation and Composition, 1 or 2 cr.; 138S. Modern French Verse Drama, 2 cr.; 139S. Molière, 2 cr.; 140S. Great Prose Writers (Nineteenth Century), 2 cr.; 243S. Old French, 1 or 2 cr.; 244S. Old French Literature, 1 or 2 cr.; 245S. Research in French.

Italian

1. Elementary Italian, 2 cr.; 236S. Research in Italian Literature.

Spanish

1a. Elementary Spanish, 4 cr.; 1b. Second Semester Spanish, 4 cr.; 10S. Second Year Spanish, 2 cr.; 90S. The Teaching of Spanish, 2 cr.; 128S. Advanced Conversation and Composition, 2 cr.; 129S. Don Quijote, 2 cr.; 239S. Research in Spanish Language and Literature.

ZOOLOGY

LECTURER JUDAY; ASSISTANT PROFESSOR WAGNER; INSTRUCTOR LOWE; ASSISTANT BISHOP.

6. Evolution, Heredity, and Eugenics, 2 cr.; 7. Animal Biology, 3 cr.; 103. Field Zoology, 2 cr.; 105. Special Problems, cr. to be arranged; 110. Entomology, 1 cr.; 120. Teaching of Zoology, 1 cr.; 124. Limnology, cr. to be arranged; 224. Research.

MEDICAL SCHOOL**ANATOMY**

PROFESSORS BARDEEN, MILLER.

110. Histology and Organology, 3 cr.; 115. Embryology, 3 cr.; 121. Human Anatomy, cr. according to work done; 122. Topographical Anatomy, cr. according to work done; 126. Neurology, 3 cr.; 130. Modern Laboratory Methods and Research.

BACTERIOLOGY

ASSOCIATE PROFESSOR CLARK.

2S. Immunity, 1 cr.; 3S. Bacteriology and Immunity, 3 cr.; 102. Medical Bacteriology, 5 cr.

CLINICAL MEDICINE

PROFESSOR EVANS; DR. DUNHAM (Cincinnati, Ohio); ASSISTANT PROFESSOR MIDDLETON; ASSISTANTS BUERKI, RICHDORF.

101. Clinical Diagnosis, 1 cr.; 102. Clinical Laboratory Diagnosis, 1 cr.; 103. Minor Surgery and Bandaging, 1 cr.

PHARMACOLOGY

PROFESSOR LOEVENHART.

104. Pharmacology, 2 cr.; 105. Pharmacology, 2 cr.

COLLEGE OF ENGINEERING

CHEMICAL ENGINEERING

ASSOCIATE PROFESSOR KOWALKE.

114. Chemical Manufacture (1st 5 wks.), 4 cr.

ELECTRICAL ENGINEERING

ASSISTANT PROFESSOR SHUSTER; INSTRUCTOR CROTHERS.

103a. Continuous Currents, 3 cr.; 131b. Alternating Currents, 2 cr.; 130. Testing Direct Current Dynamos, 1 or 2 cr.; 112a. Testing Alternating Current Machinery and Appliances, 1 or 2 cr.; 4S. Thesis and Special Work.

HYDRAULIC ENGINEERING

ASSOCIATE PROFESSOR CORP.

A. Municipal Sanitation, 1 cr.; 1. Hydraulics, 3 or 4 cr.; 102. Testing of Hydraulic Machinery, 2 cr.; 103. Experimental Hydraulics.

MACHINE DESIGN

ASSISTANT PROFESSOR KEOWN.

A. Elementary Design, no cr.; B. Machine Design for Teachers of Manual Arts, 2 cr. on Manual Arts course; 1. Mechanism, cr. to be arranged; 2. Machine Elements, cr. to be arranged; 4. Design of Complete Machines, cr. to be arranged.

MECHANICAL DRAWING

ASSISTANT PROFESSORS MILLAR, ORTH; INSTRUCTORS GRENOBLE, THOMAS.

1. Elements of Mechanical Drawing I, 3 cr.; 2. Elements of Drawing II, 3 cr.; 3. Descriptive Geometry, 3 cr.

MECHANICS

ASSOCIATE PROFESSOR WITHEY.

1. Statics, 3 cr.; 2. Dynamics, 2 cr.; 3. Mechanics of Materials, 5 cr.

SHOP WORK

SUPERINTENDENT GODDARD; INSTRUCTORS CHISHOLM, DABNEY, PAYTON, PETERS, SCHMIDT, SCHUMANN.

1. Elementary Pattern Making, 1 cr.; 2. Bench Work in Iron, $\frac{1}{2}$ cr.; 3. Elementary Forge Work, $\frac{1}{2}$ cr.; 4. Lathe Work in Metals, 1 cr.; 5. Planing and Milling, 1 cr.; 6. Tool Making, 2 cr.; 7. General Shop Work, 1 to 4 cr.; 8. Heat Treatment of Steel, 1 cr.; 9. Advanced Pattern Making and Foundry Practice, 1 cr.; 13. Foundry, 1 cr.

STEAM AND GAS

ASSISTANT PROFESSOR BLACK.

- A. Elementary Thermodynamics, 2 cr.; B. Gas Engines and Gas Producers, 1 cr.; C. Compressed Air, 1 cr.; D. Heating and Ventilating, 1 cr.; E. Calibration of Laboratory Instruments and Engine Testing, 2 cr.; F. Advanced Steam and Gas Engine Testing, 1 or 2 cr.; G. Refrigeration and Refrigerating Machinery, 1 cr.; H. Gas Engine Testing, 2 cr.

TOPOGRAPHICAL ENGINEERING

PROFESSOR BEEBE, ASSOCIATE PROFESSOR SMITH, INSTRUCTOR OWEN.

1. Elementary Surveying, (1st 2 wks.) 2 cr.; 2. Elementary Surveying (2nd 2 wks.), 2 cr.; 3. Elementary Surveying (1st 3 wks.), 3 cr.; 4. Advanced Surveying (last 3 wks.), 3 cr.; 6. Topographic Survey of Devils Lake Region, cr. according to work done; 8. Special Course for Electrical and Mechanical Engineers, 3 cr.; 10. Mining Survey, cr. to be arranged.

LAW SCHOOL

DEAN RICHARDS; PROFESSORS GILMORE, PAGE; ASSOCIATE PROFESSOR RUNDALL, ASSISTANT PROFESSOR WILKIE.

FIRST YEAR

Contracts, 6 cr.; Personal Property, 2 cr.

SECOND AND THIRD YEARS

Bankruptcy, 2 cr.; Equity I, 3 cr.; Future Interests, 4 cr.; Mortgages, 2 cr.; Partnership, 2 cr.; Sales, 3 cr.

COLLEGE OF AGRICULTURE

AGRICULTURAL BACTERIOLOGY

ASSISTANT PROFESSOR WRIGHT.

1. General Survey, 4 or 5 cr.

AGRICULTURAL CHEMISTRY

ASSISTANT PROFESSORS PETERSON, TOTTINGHAM.

- 1 and 2. General Agricultural Chemistry, 1 cr.; 3. Household Chemistry, 2 or 3 cr.; 200S. Research, cr. according to work done.

AGRICULTURAL ECONOMICS

PROFESSORS HIBBARD, OTIS; ASSISTANT PROFESSOR GALPIN.

225. Rural Sociology, 2 cr.; 130. Rural Credits, 2 cr.; 102S. Farm Management, Field Course, cr. according to work done.

AGRICULTURAL EDUCATION

104S. Agricultural Extension, 2 cr.

AGRONOMY

ASSISTANT PROFESSORS LEITH, STONE.

120. Weed Identification, 2 cr.; 19. Thesis and Field Course, 2 to 4 cr.; 130. Grain Breeding, 2 or 3 cr.

ANIMAL HUSBANDRY

ASSISTANT PROFESSOR TORMEY.

126. Live Stock Feeding, 2 cr.; 128. Teachers' Course, 2 cr.

DAIRY HUSBANDRY

PROFESSOR FARRINGTON; ASSISTANT PROFESSOR BENKENDORF.

1. Elementary Course in Dairying, 2 cr.; 102S. Dairy Practice, 1 to 4 cr.

EXPERIMENTAL BREEDING

PROFESSOR COLE.

101. Principles of Breeding, 2 cr.; 121. Topical Work, 2 or 4 cr.; 225. Research, cr. to be arranged.

HOME ECONOMICS

ASSOCIATE PROFESSOR CELESTINE SCHMIT; INSTRUCTORS CULLINAN, DODGE, KRUEGER, MADISON, ROBERTS, TURNER.

2S. Applied Design, 2 cr.; 3S. Foods, 2 cr.; 4S. Economic Problems of the Food Supply, 2 cr.; 5S. Introduction to Textiles, 2 cr.; 11aS. Dressmaking and Drafting, 2 cr.; 11bS. Advanced Dressmaking, 2 cr.; 50S. Advanced Textiles, 2 cr.; 91S. Millinery, 2 cr.; 92S. Hand and Machine Sewing for Teachers, 2 cr.; 95S. Weaving, 2 cr.; 97S. Costume Design, 2 cr.

HORTICULTURE

ASSISTANT PROFESSOR AUST.

- 3f. School and Home Ground Decoration, 2 cr.**

POULTRY HUSBANDRY

ASSOCIATE PROFESSOR HALPIN; INSTRUCTOR HAYES.

- 1. Elementary Poultry Raising, 2 cr.; 2. Poultry Judging, 2 cr.**

SOILS

ASSISTANT PROFESSOR STEWART.

- 1S. Principles of Soil Fertility, 2 cr.; 122S. Soil Physics, 2 cr.**

CONVOCATIONS

At intervals throughout the year assemblies of the members of the University are held, at which addresses are generally given. Such assemblies are known as convocations.

List of Convocation Addresses: Calendar Year 1916

Jan. 13. President Marion LeRoy Burton, of Smith College.
Subject: *The Educated Person.*

Feb. 22. Admiral Robert E. Peary, Washington. Subject:
Arctic Exploration.

March 17. President Wm. Goodell Frost, of Berea College, Ky.
Subject: *Educational Pioneering in Southern Mountains.*

May 1. Concert by the Russian Cathedral Choir, Ivan T. Gorokhoff, of Moscow, Leader.

Oct. 13. Mr. A. C. Harte. Subject: *Prison Camps of the European War.*

Nov. 1. Dr. John Finley, Commissioner of Education in New York. Subject: *Phases of Education.*

PUBLIC LECTURES

Each year the University arranges for a series of public lectures, bringing to Madison for that purpose a number of distinguished speakers. It is aimed to provide lectures of general interest and to have them cover a wide range of subjects. The lectures are free to the students and to the public.

Feb. 21, 23, 1916.

Mr. C. R. Ashbee, F. R. I. B. A. of London, England.

Feb. 21—"National and Civic Art Teaching."

Feb. 23—"The Home, the Street, and the City."

Mar. 30, 31.

Professor Paul Van den Ven of the University of Louvain, Belgium.

Mar. 30—"The Churches of Constantinople."

Mar. 31—"Byzantine Monuments in Italy."

Apr. 3.

Professor G. Lowes Dickinson, Fellow and Lecturer, King's College, Cambridge, under the auspices of the World Peace Foundation.

Apr. 3—"International Reconstruction After the War."

Apr. 4, 6.

Professor Ludwig Lewisohn of the State University of Ohio.

Apr. 4—"The Search for Reality."

Apr. 6—"The Search for Interpretation."

Apr. 20.

Professor Henry Browne of University College, Dublin, President of the Classical Association of Ireland.

Apr. 20—"Greek Music."

Apr. 27.

Professor Charles Mills Gayley of the University of California.

Apr. 27—"William Shakespeare: A Memorial Address."

Apr. 28.

Professor William Allen Neilson of Harvard University.

Apr. 28—"Shakespeare and Religion."

Oct. 5, 9 and 12.

Mr. Francis Grierson.

Oct. 5—"Music and Literature: A personal experience."

Oct. 9—"Phases of My Career: with original compositions."

Oct. 12—"An Outlook in the Future."

Oct. 12

Mr. E. R. Kennedy of New York.

"How California was Saved from Secession in 1861."

Oct. 19.

Mr. Henry Turner Bailey, Editor of "School Arts Magazine."

"Beauty in Common Things."

Oct. 24.

Mr. James J. Walsh, M. D., LL. D. formerly Dean of the
Fordham Medical School of New York.

"Social Service, Old and New."

Nov. 3.

Mr. William A. Wirt, Superintendent of Schools, Gary, Indiana,
and Special Adviser, Board of Education, New York City.

"The Gary School Plan."

Nov. 6.

Dr. Maria Montessori of Italy.

"The Principles Underlying the Montessori Method."

Nov. 20.

Dr. Charles William Wallace, Ph. D., Professor of English
Dramatic Literature in the University of Nebraska.

"New Shakespeare Discoveries."

Dec. 1.

Professor Albert G. Van Hecke, of the College of Engineering
of the University of Louvain, Belgium.

"Life in the Camps of the Belgian Refugees in Holland."

Jan. 15-16, 1917.

Professor Emannuel De Martonne, of the University of Paris.

Jan. 15—"The Geography of the Western Front."

Jan. 16—"Roumania."

Feb. 1.

Professor A. H. Sanders of the University of Michigan.

"Miniatures and Bible Texts of an Early Commentary on
Revelations."

DEGREES

CONFERRED ON COMMENCEMENT DAY, 1916

COLLEGE OF LETTERS AND SCIENCE

Bachelor of Arts

Mamie Elizabeth Anderson	Flora May Carncross
Abraham Asovsky	Elbert Hand Carpenter
Fannie Elizabeth Atwood	Vincent George Cartier
Margaret Forrest Axon	Harold Fountain Chapin
*Lee Reuben Axtell	Tsung-Hai Cheng
*Sarah Elizabeth Baily	Dorothy Bess Christensen
Beatrice Turk Baker	Irma Marie Clarke
Dorothy Agnes Bannen	Grace Colby
Henry Barnbrock, Jr.	Dora Leeanna Coleman
Edwin Hobart Bayley	Mary Cecelia Everett Comstock
Ethel Elizabeth Bechtel	Charles Sydney Conover
Victor Van Beck	Robert John Cunningham
Paul Ellsworth Behrens	Clara Marie Dahlman
*Dorothy Belleville	Justine Genevieve Dahm
Adelbert John Beyer	Ruth Eaton Davies
John Marcher Bickel	Albert Chester De Bolt
Forrest Revere Black	Louis Cornelius De Bruin
Louis Bloch	Myrtle Margaret Decker
Genevieve Florence Blum	Genevieve Elizabeth Deming
Isabelle Bodden	Dorothy Dabb Dexter
Charlotte Maconda Bodman	Ruth Esther Dillman
Jessie Margaret Bosshard	Ada Alice Dittmar
*Margaret Boyle	Mabel Emily Dittmar
Earl William Brandenburg	Edith Dodd
Ellida Julie Breidablik	Ruth Clarissa Donnelly
Elizabeth Brice	*Elsie Estelle Dorward
Marion Clarkson Brown	Charles Bryan Dunn
Randolph Fletcher Brown	*Wendell Earl Dunn
*Edwin James Brunner	Leon Kimmel Eagles
Lois Arlina Burlingame	*Ruth Elizabeth Ebinger
Le Roy Stanton Burroughs	Ann Elizabeth Edwards
Laura Hanes Cadwallader	Norma Augusta Eitelgoerge

* Degree conferred since commencement, 1916.

- Mary Frances Elwell
 *Myrtle Ann Eubank
 Arthur Euler
 Harold Boice Evans
 Edward Ludwig Falevsky
 *Helen Esther Farr
 Seymour Fiske
 Florence Fleming
 Evelyn Louese Foote
 Mary Lucile Fowler
 James Robert Frawley
 Clara Bertram Fuller
 Clara Marie Gapen
 Ada Ruth Garber
 Mabel Theresa Gay
 Ruth Bertha Glassow
 Inez Evangeline Gleason
 Alice Goodwin
 Gerald Gregory Grant
 Robert Lexow Grant
 Otta Luella Greene
 Henry Frederick Grove, Jr.
 *Magnhild Alvira Gullander
 Bernice Icylen Hagerty
 Bernadette Irene Hahn
 Fred Menzo Hall
 Helen Sara Haner
 *Marguerite Catherine John Hanley
 Alma Carrie Hanson
 *Bertha Gladys Hanson
 *Bess Frances Hanson
 Elmer Glenn Hanson
 Joel Hjalmar Hanson
 Charlotte Beverly Harpel
 Malvin Herman Hass
 Agnes Mary Hayes
 Mae Edna Heineman
 Elizabeth Helm
 Mary Hemenway
 Roy Jefferson Herrick
 *Cecelia Herried
 Harry Joseph Herzog
 Irene Higgins
 Carol Rogers Hill
 Frances Lillian Hitchcock
 Arthur Adolph Hitt
 Helen Minnie Hohlfeld
 *Alfreda Anna Holman
 Margaret Ann Howe
 *Flossie Esther Jackman
 Arnold Stevens Jackson
 Raymond Deloy Jameson
 Alice Davina Jardine
 Marion Jennings
 Donald Peter Johnson
 Edna Leora Johnson
 *George A. Johnson
 Russell Lowell Johnson
 Selma Johnethe Johnson
 *Harry Erwin Jones
 Kathlyn Janette Jones
 May Eleanor Jones
 Raymond Wood Jordan
 Clifford Ivar Josephson
 Verna Eleanor Judson
 Earl Christian Kading
 Edna Cornelia Karow
 Rosaline Kay
 Katherine Louise Kearney
 Ruth Alice Keith
 Elizabeth Cecelia Kelley
 Celestia May Kellington
 Elizabeth Mary Kelly
 Kenneth Caldwell King
 Susanna Kingsley
 Temperance Winifred Knight
 Imogene Clarissa Kriskey
 *Gustav Adolph Lake
 Helen Kathryn Lambert
 Nellie May Larsen
 Gwendoline Latham
 Lillian Edith Lawson
 Francis Knut Lee
 *Heebe Leeden
 *Kathleen Leslie
 Dorothy Lewis
 Vine David Lord
 Marion Day Luce
 Raphaella Catherine McCabe
 Thomas Frank McDonald
 *Verne Russell McDougale
 Doris Lucile McFadden
 *Norvin McQuown
 Gertrude Manegold
 Esther Caroline Mansfield
 Marion Genevieve Marshall
 †Patrick Henry Martin
 Madeline Mattox
 ClaraBel Maw
 Elsie Dorothy Mayer

* Degree conferred since commencement, 1916.

† Degree conferred March 1, 1916.

Fergus Mead
 *Norman Meland
 Henry Playman Melnikow
 Arthur John Mertzke
 Albertine Emilie Metzner
 Alma Helen Meuer
 Laura Ann Meyer
 Nelle Meyers
 Dora May Miller
 Kathryn Densmoor Miller
 Laura Roe Mills
 Vera Mitchell
 Amy Fredricka Mueller
 Bernard Christian Mueller
 Ambrose Edward Murphy
 Ruth Henrietta Myrland
 Edna Marie Nagle
 Edward Richard Narr
 Catherine Elizabeth Nebel
 Lelah Vanera Nichols
 Philip Mitchell Niederaur
 Ralph Edgar Nuzum
 Sigurd Bernhardt*Olson
 Marion Eugenia O'Neil
 Olive Carolyn Oppenorth
 Harriet Eastabrooks O'Shea
 *Joseph Orlando Otterson
 Frances Angeline Palmer
 *Vera Janet Parke
 Irene Rosalind Paul
 Cecil Philip Pearson
 Ralph Haney Perry
 Marguerite Helen Pesark
 Lillian Estelle Petersen
 Evan Hugo Peterson
 Rebecca Orpha Peterson
 Ralph Sproule Piggins
 Anita Valentine Pleuss
 Hanna Dorothea Poppe.
 Louis Atwater Pradt
 Ethel Marguerite Prescott
 Lucile Pritchard
 Etta Ida Radke
 Harry Walker Rawson
 Grace Reed
 William Richards
 Earl Gotthart Richmeier
 *Melba Clarice Roach
 Royal Arlington Roberts
 George Clarence Robinson
 Mararget Josephine Rohan

Louis Rosenberg
 Amanda Ida Ross
 Cyrus Joseph Rounds
 Lousene Gwendolynne Rousseau
 Omar T. Sadler
 Helen Viola Salsbury
 *Katherine Isabelle Sarazin
 Fred Byron Schaffer
 Agnes Beatrice Schaller
 Gladys Wilcox Schappa
 *Frank Adolph Scheuber
 Elsie Elizabeth Schneider
 *Magnus Petersen Schultz
 Alfred John Schweppe
 Eloise Susan Seavert
 Elmer Louis Sevringhaus
 Leland S. Seymour
 Edith Lucille Sharkey
 Louise Shepherd
 Horace Davis Simmons
 Charlotte Estelle Smith
 Edith M. Smith
 Helen Gertrude Smith
 Paul Richard Spencer
 Lillie Luise Spiering
 Daniel M. Spohn
 Fred Walter Stadelbaur
 Edwin Richard Stavrum
 Stephen De Witt Stephens
 *Verne Lindsay Stephenson
 *John Boardman Steven
 Frederica Leighton Stevens
 Katherine Bernice Stewart
 Cyrena Belle Stirwalt
 Frank Moore Stone
 Hosmer Ward Stone
 William Kimball Strickland
 Imogen Sturtevant
 Bessie Irene Sutherland
 Leah Elizabeth Sutherland
 *Milo Kendell Swanton
 Julia Cecil Sword
 Jennie Talbot
 Thomas Peter Tammen
 *Else Teschner
 *Vivian Trow Thayer
 Ruth Marie Thomas
 Adele Victoria Thuringer
 Jay Miller Tiffany
 *Ruth Muriel Tomlinson
 Miriam Downing Tompkins

*Isabel Glenn Treat	Webb Bogart White
*Samuel Crane Vail	Marjorie Epaminondas Wilder
Madge Patterson Van Dyke	Lawrence Henry Williams
Edward Jerald Van Liere	*Ray Evan Williams
*Madge Vaughn	Ann Elizabeth Wilson
Margaret Lydia Wahl	Margaret Mabel Wilson
*George Henry Wahle	Coie Bertha Winter
Henry Door Wakefield	Elgia Lelia Wittwer
†Marvin Weil Wallach	Henrietta Holmes Wood
Joseph Leon Ward	Iris Leota Wood
Lyman Case Ward	Hugh Otis Worthing
†Florence Giddings Watson	Susan Amelia Yeager
Caroline Mary Wells	*William Kerns Yocum
Penelope Shield Westcott	Isabel Helen Young
Crawford Wheeler	Helen Jane Zillmer

Course in Commerce

Forrest Lamont Ayer	Robert Wilson Leslie
Maurice L. Barton	Othmar Charles Link
Harry Ellis Benedict	Lawrence Joseph Lynch
Lehm Lincoln Brown	Samuel Alpheus Marsh
Grant Illion Butterbaugh	Elmer Ephraim Meyer
Alfred Dorance Chickering	Malcolm Butler Morehart
Lyle Coryell Clarke	Frank Sloan Morris
William Foster Clifford	Glenn Lewis Ramsdell
*Edwin Joseph Connor	Fred Henry Reimers
John Nelson Duncan	Harry William Rieger
Abraham John Eder	George Louis Ruder
Donald Ross Hotchkiss Fellows	Frederick William Rumpf
Armand Lamfrom Froehlich	Roy Hugo Schmidt
Richard Henry Garling	William John Charles Schmidt
William Leroy Gittings	Arthur Karl Schulz
William Bradshaw Goldie	Nathan Shapiro
Charles Keith Harris	Howard Leaman Smith
Walter Edmund Heineman	*Lynwood Herbert Smith
Charles Lloyd Henry	Truman Rhoades Spooner
Thomas Hunt Imhoff	*Edward John Thomas
Ben Melvin Jensen	Samuel Wilfred Timson
Archie William Kimball	Howard Myron Van Auken
Theodore Michael Knapstein	Edward Fritz Voss
Marco Ray Kucheman	Dana Wykoff Walsh

* Degree conferred since commencement, 1916.

† Degree conferred March 1, 1916

Course in Journalism

Ruth Murrin Boyle
 Callendar Armstrong Crosser
 Fred Martin Distelhorst
 Martin Henry Higgins
 *Glenn Viering Kraus
 Norman Columbus Lucas
 Alfred Wallace Meyer
 Harry Saunders Murphy

Edward Mills Pittinger
 Howard Irving Potter
 Arthur William Prussing
 William Athniel Rech
 William Burke Reedy
 Irving Haight Wanzer
 Alex Frank Zache

Bachelor of Philosophy

†Hubert Claire Almy
 Emily Alice Budd
 *Laudimire Joseph Coubal
 Clifford Elzer Granger
 Henry Magnus Halverson
 Mary Marella Hayden
 *Frederick William Hein
 *Erskine La Verne Jay
 *Irving Willard Jones
 Earl Kempthorne Lightcap
 Robert Timothy McGrath
 Stephen Sumner McNelly
 Marguerite Mock

Ernest Joseph Philipp
 Mary Grace Powers
 *George J. Ritter
 Ruby Schafer
 *Ema Schlegel
 Walter Alexander Scott
 Mildred Brown Starr
 Myrtle Holmes Stocking
 *Victor Emanuel Thompson
 Harvey August Uber
 Hazel Elizabeth Wilber
 Elaine Emogene Wyman

Bachelor of Letters, English Course

†John Jacob Enge

Bachelor of Science, Chemistry Course

*Nathaniel Arthur Bailey
 John Eric Bock
 Lloyd Athel Bosworth
 *Werner Duecker
 Gerhard Wilhelm Duemling
 *Herbert Melvin Gaarder
 George W. Haverstick
 Walter Charles Hawes
 Alfred Julius Johnson

Henry Baldwin Merrill
 Merle Starr Nichols
 Harry Richard Palmbach
 †Philip Angus Ritter
 Ernest Rudolph Schierz
 Fred Carl Schilling
 John Frank Steph
 Yu-Mei Zhentzu Tseng
 Garvin Daniel Williams

Bachelor of Science, Pharmacy Course

Henry Farrand Miller

Leonard John Schwartz

* Degree conferred since commencement, 1916.

† Degree conferred March 1, 1916.

‡ Degree conferred as of the class of 1899.

Graduate in Pharmacy

William Guy Bartlett
 *Guy Henry Butcher
 Roy Alvin Clifgard
 Hans Andrew Hansen

George Elmer Loftus
 Ronald Henry Mahre
 Leonard Justus Ostlund
 Lawrence Avery Solberg

Bachelor of Science, Medical Science Course

Franklin Blevins Bogart
 Barnet Edward Bonar
 Meredith Fairfax Campbell
 Fremont Augustus Chandler
 George Ernest Collentine
 *Frank Emmett Downs
 Theodore Adolph Estrem
 *Arthur Thomas Farisy
 Clark Wylie Finnerud
 William Anthony Heinrich
 Jacob Frank Henken
 Maud Eva Hillberry
 Jacob J. Horwitz

Griffith S. Jones
 Harold Dabney Kerr
 Thomas Benjamin Noble
 Thomas Stanley O'Malley
 Joseph Arnold Opstedal
 Bernard Schlossmann
 Chester Clayton Schneider
 John Harvey Skavlem
 *Hartwick Martinus Stang
 *Joseph Vincent Taylor
 William Edward Wegge
 Marcia Katherine Wright

COLLEGE OF ENGINEERING

Bachelor of Science

Civil Engineering Course

Albert Owen Ayres
 George Gilbert Bothum
 John Broyles
 William Wallace Cargill
 *Robert Michael Connelly
 †Guy Elmore Diehl
 *Seren Harold Edwards
 Paul Spier Egbert
 George Eldred
 Erwin William Fisher
 *Raleigh Welch Gamble
 *Irving Goldfein
 William Carl Green
 Solomon Cady Hollister
 *Paul Donald Mitchell
 Louis Fred Nelson

Robert Hughes Parker
 Robert Peter Petersen
 Raymond Adelbert Phelps
 Herman Theodore Pott
 Edwin Albert Pyncheon
 Eugene Miner ReQua
 ‡Le Roy Salisch
 Keith Crawford Spayde
 Maynard Joseph Steere
 Milton Carl Steuber
 Kan Su
 Walter Michael Swietlik
 Henry Whitney Tabor
 John William Tanghe
 Rush Elmer Thomas
 Howard Thwaites

* Degree conferred since commencement, 1916.

† Degree conferred as of the class of 1902.

‡ Degree conferred as of the class of 1901.

Mechanical Engineering Course

Nelson Dater Barnet	Claude Norman Maurer
Edward Erp-Brockhausen	Robert Joseph Mensel
Ben Stalker Buckmaster	Rudolph Michel
Fred Lyman Connit	Harry Victor Plate
Thomas Nelson Gilder	Sumner Rodriquez
John William Grosskopf	*Charles Whitman Stuart
William Dow Harvey	Joseph Rodney Swetting
Roland Jens	Joseph Aloys Weber
Charles McLeod Lewis	John Butler Wilkinson
John V. McKinney	

Electrical Engineering Course

George Henry Joseph Andrae	Frederick Gerhardt Mueller
Edwin Lee Andrew	Armin Karl Neubert
George Lysle Ballard	William Arthur Olson
Thomas Edmund Bennett	Roswell Park Orr
George Edward Booth	Harry Charles Pollak
Robert Jerry Coughlin	Philip Roberg
Karl Ehrigott	Wilfred Alexis Royce
Robert Newton Falge	Wallis Samuel Salmon
William Revel Feiler	Nicholas Joseph Schmitz
John Ulrich Heuser	Lloyd Mabie Strand
Philip Alexander Jameson	William Kearney Walthers von Alten
John Franklin Johnson, Jr.	*Grant Robert Wells
Edwin Andrew Kaumheimer	John Edwin Wise
Carl Henry Krueger	John Ward Young
Lewis Paton McGilvary	

Chemical Engineering Course

*Francis Edwin Bash	Hubert Everet Nelson
Kenneth Richard Burke	Charles Henry Nicholson
Alford George Canar	Ralph Forbush Norris
Earl Chambers Dexheimer	Paul Reeve Stimson
Herbert Arthur Gollmar	Stanton Umbreit
Victor Carl Hameister	Gustave Hugo Watzke
*Freeman Doolittle Lohr	Charles Blake Willmore
Robert Sylvester Magatagen	

Mining Engineering Course

*Thomas Harold Kernan	Harold Lippert Rau
-----------------------	--------------------

General Engineering Course

†Arthur Bates Grindell

* Degree conferred since commencement, 1916.

† Degree conferred as of the class of 1902.

GRADUATES OF ADVANCED ENGINEERING COURSES**Civil Engineer**

Harry August Doeringsfeld
 Harold Frederick Janda
 James Albert Schad

Frederick Slocum Howard Smith
 James Pettigrew Woodson

Mechanical Engineer

Arthur Davis Fulton
 John Frederick Gross

Raymond Coleman Parlett

Electrical Engineer

Owen Hayward Loynes

Chemical Engineer

David Napoleon Carlson

Herbert Jacob Moon

COLLEGE OF AGRICULTURE**Bachelor of Science (Agriculture)**

Samuel Basherov
 Ralph Monroe Beckwith
 Frank Westby Benedict
 Murray Reed Benedict
 Louis Adolf Bensend
 Cyril Robert Bodenbach
 Ralph Maxwell Bohn
 Jacob Kreider Bowman
 Laurel Andrew Brady
 Irving Verne Bullis
 Arthur De Vries Burke
 *Gage Bird Bye
 *Edmund Peter Cappell
 Joseph Carson
 Earl John Cooper
 Albert Julius Cramer
 Leo Bradford Cummings
 Edward Timothy Cusick
 Walter Rockwood Dunwiddie

Dan Wilson Flickinger
 Axel Carl Forsberg
 George Anton J. Foshinbaur
 Victor Grover Foshinbaur
 Morton Leo Geraldson
 †John Hamilton Gill
 Joseph Kingsbury Greene
 Guy Smithers Hales
 Karl Burchard Hanson
 Edwin Joseph Hauser
 *Randolph Olaf Helland
 *Eugene Davenport Holden
 Byron Ricks Houser
 Harold Herbert Huston
 *Earl Wedderburn Hutchison
 *Charles Arthur Jackson
 Lester Jay Jensen
 Ira David Jones
 Julius Leo Jordan

* Degree conferred since commencement, 1916.

† Degree conferred March 1, 1916.

Alois Michael Kessenich	Richard Douglas Robertson
Martin M. Kloser	Melvin Passon Roske
Oscar Martin Knudson	Jacob Rovner
Walter B. Krueck	Frederick Sanborn
Raymond Alfred Lamberson	Louis Milton Sasman
Wallace Joseph Landry	James J. Sazama
Walter Antony Leukel	Gustav Adolph Sell
Albert Reed Trenholm Lillie	Oscar John Sieker
Robert McCutcheon	Joseph Ellsworth Simmons
Johy Alexander McCutchin	Frank Joseph Slaby, Jr.
*Joseph Emmett McGilvray	Winfield Scott Smith
*Ralph Alexander McGilvra	George Edward Spengler
Paul Herbert McMaster	Ralph William Stone
Leslie McNaughton	Albert Miller Storrs
Loren MacQueen	Peter Carl Strehlow
Alexander Magnus	Edmund Julius Suhr
Arnold Ivan Maxwell	Barnett Sure
Homer Clark Melvin	James Sykora
Leslie Joseph Merriam	Malvin Helmer Teige
Clifford Merriman	Edmund Harry Thompson
Merton Moore	*James Andrew Towler
D. Benjamin Morris	Horace Warner Truesdell
Arthur Cyriak Murphy	Eldon John Weber
Reid Fred Murray	Charles Emerson Webster
Arthur Henry Neumann	Albert Carl Weimar
Johannes Kleofas Nord	John Taylor Wheeler
*Ralph Lester Ostrander	Henry Ellis White
Gail Wesley Palmer	Lester McClellan Whitmore
Alfred Clyde Parfrey	Joseph Lloyd Williams
John Thomas Raine	Graham Eugene Wilson
†Charles Steven Reddy	*George Henry Woelfel

Bachelor of Science, Home Economics Course

Florence Mathilda Ackermann	Violetta Irene Hawley
Gladys Andrews	Carrie Adelle Hibbard
Dora Russell Barnes	Beatrice Marguerite Howard
Inez Mae Boyce	Ingeborg Marie Iversen
Florence Evelyn Brookins	Ruth Klemme
Helen Winifred Brooks	*Dorothy Laing
Hope Elizabeth Cobb	Mabel Josephine Larson
Dorothy Beatrice Cooper	Gertrude Church Leland
Edith May Damon	Gladys Louise Meloche
Emma Adele Dreger	*Lulu Morris
Lillian Eastland	Alice Louise Peck
Florence Marie Ely	Rena Kate Piper
Elizabeth Honora English	Sarah Harriet Porter
Irene Esther Esch	Avis Marie Richards
Irene Helen Fredrick	Eleanor Adelaide Sime
Mary Grace Godfrey	Vera Belle Spinney

* Degree conferred since commencement, 1916.

† Degree conferred March 1, 1916.

Martha Ellen Stanly
 Alice Victoria Stewart
 Leola May Strickler
 *Margaret Lincoln Taylor
 Florence Nightingale Turner

Sarah Elizabeth Warwick
 Katherine Elizabeth Wattawa
 Margaret Whitehead
 Alice Whitney
 Inez Searles Willson

Graduate in Agriculture

*Edward Andrew Biery
 Raymond Francis Bloecher
 Scott Doup
 Carl Victor Fisher
 Harold Douglas Fowler
 *Julius Ole Hembre
 †Earl Hughes
 Howard Francis Joyce
 Gordon Frank Kritz
 Dorothy Loomis

Alvin Fred Preston
 Nathaniel Gifford Preston
 Everett Samuel Prouty
 *Robert John Roberts
 *Frederick Warren Shoemaker
 Charles Merwyn Slagg
 Robert Henry Travis
 †Chester Albert Williams
 Guy P. Williams
 Joseph Lucas Williams

LAW SCHOOL

Bachelor of Laws

Cornelius Michael Conway.
 Harold Forster Dickens
 Richard Sterling Ely, B. A.
 Clarence Erikson, B. A.
 Guyon Tompkins Fisher
 John Martin Fordyce
 †Harvey Clarence Hartwig
 †Raymond Julius Heilman
 Roland Stevens Homet
 Floyd Jenkins
 Walter Alfred John
 †James Kerr Lowry
 Roscoe Rudolph Luce
 Archibald Ernest MacQuarrie
 William Amberg Martin
 Harold Leland Merkel, B. A.

Elton Joseph Morrison, Jr., B. A.
 Harry George Newman
 John Searle Osborn
 Christian John Otjen, B. A.
 Milton Norman Quale, B. A.
 Louis Jacob Shanhouse, B. A.
 Aloysius David Shannon
 †Perry Arthur Stetteland
 Glenn William Stephens
 John James Stewart
 Robert Reinholdt Strehlow, B. A.
 Edmond Galbraith Toomey
 Glenn Patterson Turner
 †Arthur Joseph Whitcomb
 Charles Earl Wilson

SCHOOL OF MUSIC

Graduate in Music

Floy Matilda Humiston

Marie Anna Elizabeth Paltz

* Degree conferred since commencement, 1916.

† Degree conferred March 1, 1916.

Graduates from Course for Supervisors of Music

Lilly Maude Andrews	Irene Mary Lappley
Emilie Crecencia Benesh	Elfrieda Adelaide Nachtigall
Elizabeth Helen Bradford	Kathryn Parkinson
Mildred Josephine Cozzens	Mabelle Idelia Paulson
Irene Clara Edwards	*Charlotte Elizabeth Preston
Marie Finney	Agnes Cecelia Skelton
*Gladys Elvira Gnagi	Carlisle Edward Stevenson
Myra Susan Harker	Kathleen Rosamond Van Hecke
Thelma Caroline Kuhns	Elgia Lelia Wittwer

GRADUATE SCHOOL

Master of Arts

Helen Humphrey Abrams, B. A. (University of Wisconsin) in History
 John Einar Anderson, B. A. (Brigham Young University) in Physics
 Harry Neal Baum, B. A. (University of Wisconsin) in European History
 John William Beath, B. A. (University of Wisconsin) in Education
 Reese C. Bowton, B. A. (Indiana University) in Education
 Albert Brann, B. A. (University of Wisconsin) in Inorganic Chemistry
 Elizabeth Brewn, B. A. (University of Wisconsin) in Romance Languages
 Mabel Mary Brown, B. A. (University of Wisconsin) in Botany
 Ruth Moore Butcher, Ph. B. (Mt. Union College) in English
 Ruby Caulfield, B. A. (Mississippi Industrial Institute and College) in French.

*Grace Berenice Cooper, B. A. (Beloit College) in English
 Finla Goff Crawford, B. A. (Alfred University) in American History
 William Harold Davis, B. A. (Cornell University) in Plant Pathology
 *Winifred Lemon Davis, B. S. (Ohio Wesleyan University) in Sociology
 *Carrie Louise De Nise, Ph. B. (Grinnell College) in Sociology
 Paul Logan De Verter, B. A. (Wabash College) in Chemical Engineering
 Elise Forsythe Dexter, B. A. (University of Wisconsin) in German
 *Zoe Malinda Dobbs, B. A. (Tuscaloosa Female College) in Romance Languages

Mabel Dooley, B. A. (Randolph Macon Woman's College) in English
 Conrad Joseph Eppels, B. A. (Royal Teachers College, Germany) in German
 James Roy Everett, B. A. (Indiana State Normal College) in Mathematics
 Riah Belle Fagan, B. A. (University of Wisconsin) in Latin and Greek
 Andrew John Fedt, B. A. (Red Wing Seminary) in English
 *Holmes Dunbar Ferris, B. A. (Beloit College) in Political Science
 Raymond O. Filter, B. A. (Baldwin-Wallace College) in Psychology
 Leighton George Foster, B. A. (Lawrence College) in Agricultural Economics

*Mabel Goddard, B. A. (University of Wisconsin) in English

* Degree conferred since commencement, 1916.

- Elta Anne Goodchild, B. A. (Morningside College) in German
- *Mary Elizabeth Greene, Ph. B. (Greenville College) in English
- Charles Hunt Greenleaf, B. A. (Stanford University) in Romance Languages
- Alfred Paul Haake, B. A. (University of Wisconsin) in Political Economy
- Anne Shoemaker Haines, B. A. (Swarthmore College) in German
- Aileen Spaulding Hammond, B. A. (University of Chicago) in Spanish
- Rose Edna Hargrave, B. A. (Lawrence College) in English
- Raymond Foulston Haulenbeek, B. A. (Princeton University) in Greek
- Irene Cole Hickok, B. A. (Barnard College) in Political Economy
- *James Leonard Highsaw, B. A. (University of Oklahoma) in Sociology
- *Frederick Franklin Householder, B. A. (University of Wisconsin) in
Physics
- *Alice Ethel Hughes, B. A. (St. Mary's College, Portland, Ore.) in Latin
- Harry Christopher Humphreys, B. A. (West Virginia University) in
Education
- Gladys S. Jerome, B. A. (University of Omaha) in English
- Richard Uriah Jones, B. A. (Macalester College) in Chemistry
- Elizabeth Verran Joslin, B. A. (University of Wisconsin) in Latin
- Adolph Henry Kazda, B. A. (University of Wisconsin) in History
- *Anne Bassett Kelley, B. A. (Beloit College) in English
- Mary Agnes Kidder, Ph. B. (University of Chicago) in Sociology
- Burdette Ingersoll Kinne, B. A. (University of Wisconsin) in French
- Anna T. Kitchel, B. A. (Smith College) in English
- Mary Helen Kraft, B. A. (University of Minnesota) in German
- *May Rogers Lane, B. A. (Mount Holyoke College) in Sociology
- Frederick Collins Lee, B. S. (Johns Hopkins University) in Chemistry of
Forest Products
- Ruth Hutchinson Lindsay, B. A. (Wellesley College) in Botany
- Genivera Edmunds Loft, B. A. (University of Wisconsin) in Geography
- George Leroy Luke, B. A. (Brigham Young University) in Physics
- *Susan McCoy, B. S. (University of Missouri) in English
- Charles McKinley, B. A. (University of Washington) in Political Science
- *Loren Carey McKinney, B. A. (Lawrence College) in European History
- Alma Louise McMahon, Ph. B. (University of Wisconsin) in History
- *James Oscar Marberry, B. A. (Ewing College) in Education
- *Irene Marshall, B. A. (Simpson College) in English
- Harry Edwin Martin, M. A. (Center College) in English
- William Frederick Meggers, B. A. (Ripon College) in Physics
- Gertrude Mengelberg, B. A. (Wellesley College) in German
- Gladys Miller, B. A. (University of Wisconsin) in History
- Sidney Lincoln Miller, B. A. (Kansas State Normal College) in Political
Economy
- Samuel Morehead Millner, Jr., B. S. (Virginia Military Institute) in Ro-
mance Languages
- *De Witt Schuyler Morgan, B. A., (Henry Kendall College) in Political
Economy
- Hannah Morris, B. A. (University of Wisconsin) in History
- Harold Hulett Morris, B. A. (University of Wisconsin) in Chemistry
- Albert Marinus Nelson, B. A. (Red Wing Seminary) in Education
- *Milton Benjamin Nugent, B. A. (Indiana State Normal College) in Botany
- Sigurd Louis Odegard, B. A. (University of Wisconsin) in Political Economy

* Degree conferred since commencement, 1916.

- *Rebecca Tyler Osler, B. A. (Swarthmore College) in Sociology
 Francis Edwin Peterson, B. A. (Luther College) in German
 Marguerite Ruth Pohle, B. A. (University of Wisconsin) in Latin
 Goldie Jackson Reeves, B. A. (Indiana State Normal School) in Latin
 Mary Creegan Roark, B. A. (National University) in Education
 Marinda Ingalls Roberts, B. A. (Milwaukee Downer College) in History
 Wyatt Rushton, B. A. (University of Alabama) in Journalism
 Gertrude Eva Ryan, B. A. (Vassar College) in English
 *Charles N. Saltus, B. A. (Colorado State Teacher's College) in English
 *Albert Amiel Schaal, B. S. (University of Wisconsin) in Agricultural Chemistry
 George Melvin Schwartz, B. A. (University of Wisconsin) in Geology
 Percy B. Shostac, B. A. (University of Wisconsin) in English
 *Sister Mary Fidelis, O. S. D., B. A. (University of Wisconsin) in Physics
 †Sister Mary Clementine Tallon, Ph. B. (University of Chicago) in English
 Gilbert Brown Lorenzo Smith, B. A. (Colgate University) in Chemistry
 Pearl Mabry Smith, B. A. (University of Wisconsin) in Botany
 *Fred Clifton Spalding, B. S. (Hanover College) in Sociology
 †Wyandotte James Stevens, M. A. (Lebanon University) in Education
 Frank Barnes Thayer, B. A. (Oberlin College) in Journalism
 Eben Henry Toole, B. A. (University of Wisconsin) in Botany
 *William Ray Teeters, B. A. (Indiana University) in Chemistry
 *William Russell Tylor, B. A. (Swarthmore College) in Political Economy
 Hermann H. Wiebe, B. A. (University of Nebraska) in German
 *Frederick Wood, B. A. (University of Wisconsin) in Mathematics
 Lydia Dudley Woodbridge, B. L. (Mt. Holyoke College) in German
 Kathleen Wright, B. A. (Saint Clara College) in English
 Rowe Wright, B. A. (University of Wisconsin) in English
 Elizabeth Tabita Zimmerman, B. A. (University of Michigan) in German

Master of Science

- Fred Hunter All, B. S. (Clemson College) in Animal Husbandry
 *William Henry Atwood, B. A. (Hope College) in Zoology
 †Leo John Bachhuber, B. S. (University of Wisconsin) in Experimental Breeding
 Herbert Bassett, B. S. (University of Illinois) in Geology
 Joseph Aloysius Becker, B. S. (University of Wisconsin) in Agricultural Economics
 Wayne Harrison Bently, B. S. (University of Wisconsin) in Agricultural Chemistry
 Van Lorens Bohnson, B. S. (University of Wisconsin) in Chemistry
 Robert Kline Bonnett, B. S. (Kansas State Agricultural College) in Agronomy
 Harold William Browning, B. S. (Rhode Island State College) in Botany
 *Arthur Merton Chickering, Ph. B., (Yale University) in Zoology
 Charles William Clifford, B. A. (University of Denver) in Agricultural Chemistry
 Florence Maude Coerper, B. A. (University of Wisconsin) in Plant Pathology

* Degree conferred since commencement, 1916.

† Degree conferred March 1, 1916.

- Herbert Press Cooper, B. S. (Clemson College) in Agronomy
 Millard Crane, B. S. (Purdue University) in Agricultural Economics
 *Donald DuShane, B. S. (Hanover College) in Education
 Martin Joseph Fardy, B. S. (Marquette University) in Medicine
 Katherine Ellen Faville, B. S. (University of Wisconsin) in Chemistry
 *Guy Kenneth Foster, B. A. (University of Missouri) in Soils
 Charles Vern Fowler, B. S. (University of Wisconsin) in Electrical Engineering
 Emma Francis, B. S. (Columbia University) in Home Economics
 William Merriott Gibbs, B. S. (University of Missouri) in Agricultural Bacteriology
 Robert Shiell Goodhue, B. S. (University of Wisconsin) in Soils
 Mark Hindley Green, B. S. (Utah Agricultural College) in Agricultural Economics
 *Frank Carl Gutsche, B. S. (University of Minnesota) in Chemistry
 Russell Edwin Hartman, B. S. (Pennsylvania State College) in Plant Pathology
 *Charles Axtell Hunter, B. S. (Kansas State Agricultural College) in Agricultural Bacteriology
 Edna Emma Jolivette, B. A. (University of Wisconsin) in Physical Education
 De Witt Owen Jones, B. S. (Carroll College) in Chemistry
 Maldwyn Lloyd Jones, B. S. (University of Wisconsin) in Chemistry
 Sarah Van Hoosen Jones, Ph. B. (University of Chicago) in Animal Husbandry
 †Cornelia Kennedy, B. A. (University of Minnesota) in Agricultural Chemistry
 Martin Halvor Knutsen, B. S. (University of Wisconsin) in Agricultural Bacteriology
 Arthur Henry Kuhlman, B. S., (University of Wisconsin) in Animal Husbandry
 John Wentworth Leedy, B. S. (University of Minnesota) in Botany
 William Otto Lockhart, B. S. (University of Missouri) in Agricultural Education
 Hilmar George Martin, B. A. (University of Wisconsin) in Medicine
 Ernest Bertram Matthews, B. A. (Kansas State Normal School) in Agricultural Education
 Lee Percy Mehlig, B. S. (University of Wisconsin) in Anatomy
 Roger Emmett Moore, B. A. (University of Wisconsin) in Mathematics
 Norbert Robert Mueller, B. S. (University of Wisconsin) in Pharmacy
 *Ray V. Murphy, B. S. (Illinois Wesleyan University) in Chemistry
 Samuel Maximilian Nelson, B. S. (Rutgers College) in Sociology
 Barendra Kumar Palit, B. S. (University of Wisconsin) in Medicine
 Helen Tracy Parsons, B. S. (Kansas State Agricultural College) in Agricultural Chemistry
 George Frederick Potter, B. S. (University of Wisconsin) in Horticulture
 Olga Charlotte Pressentin, B. A. (University of Wisconsin) in Physical Education
 *Charles Steven Reddy, B. S. (University of Wisconsin) in Plant Pathology

* Degree conferred since commencement, 1916.

† Degree conferred March 1, 1916.

- J. Edward Richardson, Jr., B. A. (Johns Hopkins University) in Horticulture
- *Oscar Edwin Siegfried Roeseler, B. S. (University of Wisconsin) in Chemistry
- *Ralph Merrill Rutledge, B. S. (Oregon Agricultural College) in Agricultural Economics
- Lee Jay Schenkenberg, B. S. (University of Wisconsin) in Agricultural Chemistry
- Lloyd Marcus Schindler, B. A. (University of Wisconsin) in Agricultural Engineering
- Curtis Everett Smith, B. A. (Mississippi Medical College) in Medicine
- Mary Bosworth Stocking, B. S. (Simmons College) in Home Economics
- Anna Holden Strang, B. A. (Colorado College) in Plant Pathology
- Clinton Kenney Textor, B. S. (University of Wisconsin) in Chemical Engineering
- Edith Sommer Tomhagen, B. A. (University of Wisconsin) in Medicine
- †De Wayne Townsend, B. A. (University of Wisconsin) in Anatomy
- Wanda Weniger, B. S. (Oregon Agricultural College) in Botany
- John Barlow Youmans, B. A. (University of Wisconsin) in Medicine
- Kwank Pi Young, B. A. (University of Wisconsin) in Chemistry
- Marvin Hooper Young, B. S. (University of Texas) in Agronomy

Master of Philosophy

- Gustav William Gehrand, Ph. B. (University of Wisconsin) in Agricultural Education
- *Nelle Grace Hudson, Ph. B. (University of Wisconsin) in Geology

Master of Public Health

- Hugo Mueller, M. D. (University of Michigan) in Medical Bacteriology
- Ira Fay Thompson, M. D. (Bennett College, Chicago)
- *Mary Rhoda Wetmore, M. D. (University of Michigan) in Medicine

Civil Engineer

- Harold Leigh Algeo, B. S. (University of Wisconsin)
Thesis: Tests on the effect of curing Portland cement concrete in steam at atmospheric pressure
- Hans Nelson Brue, B. S. (University of Wisconsin)
Thesis: The development of highway bridges in Wisconsin
- Cuthbert Powell Conrad, B. S. (University of Wisconsin)
Thesis: An investigation of the flow of water over some types of submerged weirs and dams
- William Henry Fowler, B. A. (University of Texas)
Thesis: An investigation of the flow of water over some types of submerged weirs and dams

* Degree conferred since commencement, 1916.

† Degree conferred March 1, 1916.

Carl J. Johnson, B. S. (South Dakota State College)

Thesis: An investigation of the effect of the variation in velocity on the coefficient of a pitot tube

Ira Burton Lanphier, B. S. (South Dakota State College)

Thesis: An investigation of the effect of the variation in velocity on the coefficient of a pitot tube

John Murray Ray, B. S. (University of Wisconsin)

Thesis: Methods of valuing buildings

Martin Wilhelm Torkelson, B. S. (University of Wisconsin)

Thesis: Highway drainage structures

Mechanical Engineer

Arthur Charles King, B. S. (University of Wisconsin)

James Donald MacLean, B. S. (University of Wisconsin)

Electrical Engineer

George Harrison Gray, B. S. (Massachusetts Institute of Technology)

Thesis: Design, construction, and tests of an artificial power transmission line for the Telluride Power Co., of Provo, Utah

Bert Hila Peck, B. S. (University of Wisconsin)

Thesis: The collection, preparation, and presentation of engineering data necessary for a determination of equitable rate schedules for electric utility service

Chemical Engineer

Raymond Clarence Downing, B. S. (University of Wisconsin)

Thesis: Some fundamentals affecting the utilization of gas oil in carburetted water gas manufacture

I. Philip Silverstein, E. M. (Columbia University)

Thesis: The effect of varying humidities on the physical properties of paper

Doctor of Philosophy

Ben Albert Arneson, M. A. (University of Wisconsin) in Political Science and Political Economy

Thesis: Civil service reform in state administration

Sarah Morehouse Beach, M. A. (University of Wisconsin) in German Literature, German Philology, and English

Thesis: The struggle of the two generations in the German drama since Lessing

† John Carl Blankenagel, B. A. (University of Wisconsin) in German and Philosophy

Thesis: The theory of life of Heinrich von Kleist

† Degree conferred March 1, 1916.

- John Kester Bonnell, M. A. (Harvard University) in English, French and Italian
 Thesis: Religious drama and Christian art: studies in their relationship
- Paul Winslow Boutwell, M. A. (University of Wisconsin) in Agricultural and Inorganic Chemistry
 Thesis: The phytic acid of the wheat kernel and some of its salts
- Martha Letitia Edwards, M. A. (University of Wisconsin) in American History, European History and Philosophy
 Thesis: Government patronage of Indian missions
- William Henri Eller, M. A. (University of Wisconsin) in German, Norse, and Comparative Literature
 Thesis: Ibsen in Germany, 1870-1900
- Vernor Clifford Finch, B. S. (University of Chicago) in Geography, Meteorology and Geology
 Thesis: An atlas of world agriculture
- Frank Gray, M. S. (University of Wisconsin) in Physics, Mathematical Physics, and Mathematics
 Thesis: The optical activity of liquids and gases
- William Arthur Gruse, M. A. (University of Wisconsin) in Chemistry of Forest Products, Physical Chemistry, and Pharmaceutical Chemistry
 Thesis: On the reactions of both the ions and the molecules of acids, bases, and salts, the inversion of menthone by sodium, potassium and lithium ethylates
- Milton Rietow Gutsch, M. A. (University of Wisconsin) in Medieval History, European History, and Political Economy
 Thesis: The papal preparations for the fourth Crusade
- Lester Davisson Hammond, M. A. (University of Wisconsin) in Chemical Technology, Physical Chemistry, and Organic Chemistry
 Thesis: The electro-deposition of nickel
- *John Donald Hicks, M. A. (Northwestern University) in American History, European History and Political Science
 Thesis: Western state making, 1888-1890
- †Roy Jay Holden, B. S. (University of Wisconsin) in Geology, Chemistry and Topographical Engineering
 Thesis: History of the iron ore industry in the United States
- William Otis Hotchkiss, C. E. (University of Wisconsin) in Geology
 Thesis: Mineral land classification
- Heman Lauritz Ibsen, M. S. (University of Wisconsin) in Experimental Breeding, Zoology, and Botany
 Thesis: Tricolor inheritance. I. The tricolor series in guinea pigs. II. The Basset hound. III. Tortoise-Shell cats.
- *Kate Wetzel Jameson, M. A. (University of Wisconsin) in German and Philosophy
 Thesis: Goethe's Stellung zur Frau nach Selbstzeugnissen aus der Zeit vor 1800

* Degree conferred since commencement, 1916.

† Degree conferred March 1, 1916.

Richard Anthony Muttkowski, B. A. (University of Wisconsin) in Zoology and Botany

Thesis: The fauna of Lake Mendota: a qualitative and quantitative survey with special reference to the insects

Warren Milton Persons, B. S. (University of Wisconsin) in Political Economy and Mathematics

Thesis: The variability in the distribution of wealth and income

Ernest John Pieper, M. A. (University of Wisconsin) in Chemistry of Forest Products, Physical Chemistry, and Plant Physiology

Thesis: On the products obtained from wood by the action of fungi and by destructive distillation

*William Brasser Pietenpol, M. A., (University of Wisconsin) in Physics, Mathematical Physics and Mathematics.

Thesis: Spectral emission of molybdenum as a function of temperature

*Harold Scott Quigley, B. A. (Oxford University) in Political Science, History and Political Economy

Thesis: The immunity of private property from capture at sea

Lucy George Roberts, M. A. (University of Wisconsin) in Latin and Greek

Thesis: An introduction to the fables of Phaedrus

*Manuel Luz Roxas, M. S. (University of the Philippines) in Agricultural Chemistry, Agricultural Bacteriology and Plant Chemistry

Thesis: The reaction between amino acids and carbohydrates as a probable cause of humin formation

Arlie William Schorger, M. A. (Ohio State University) in Chemistry of Forest Products, Pharmaceutical Chemistry, and Physical Chemistry

Thesis: Contributions to the chemistry of American conifers

Henry August Schuette, M. S. (University of Wisconsin) in Food Chemistry, Plant Chemistry and Botany

Thesis: A biochemical study of the Plankton of Lake Mendota

†James Morgan Sherman, M. S. (University of Wisconsin) in Agricultural Bacteriology, Dairy Husbandry and Zoology

Thesis: Studies on soil protozoa and their relation to the bacterial flora

Thomas Marshall Simpson, M. A. (University of Wisconsin) in Mathematics and Mathematical Physics

Thesis: On a functional equation of Abel

Harry Steenbock, M. S. (University of Wisconsin) in Agricultural Chemistry, Physiology, and Chemistry of Forest Products

Thesis: Studies in nutrition

William Nichols Steil, Ph. B. (University of Wisconsin) in Botany and Zoology

Thesis: Apogamy in *Nephrodium hirtipes* Hk

Joseph Clark Stephenson, B. S. (University of Chicago) in Zoology

Thesis: Studies on the development of characters in normal and hybrid chicks

* Degree conferred since commencement, 1916.

† Degree conferred March 1, 1916.

Erwin Rudolph Stoekle, M. S. (University of Wisconsin) in Physics,
Mathematical Physics, Electrical Engineering

Thesis: The thermionic properties of molybdenum

†**Edwin Charles White, B. A.** (Johns Hopkins University) in Chemistry
of Forest Products, Physical Chemistry and Physics

Thesis: On the theory of indicators; the reactions of phenosulphon-
phthalein and some of its derivatives

Vive Hall Young, Ph. M. (University of Wisconsin) in Botany and Plant
Physiology

Thesis: Some factors affecting enzyme formation in certain fungi

HONORARY DEGREES

Doctor of Laws

BURN W. JONES, Professor of Law in the University of Wisconsin, 1885-1915.

Doctor of Science

LUDVIG HEKTOEN, Head of the Department of Pathology and Bacteriology
in the University of Chicago, and the Director of the Chicago Memorial
Institute for Infectious Diseases.

GRADUATION HONORS

Honors for Theses

College of Letters and Science

Abraham Assovsky, in Political Economy

Thesis: A Statistical comparison of unemployment in Massachusetts,
New York, and Great Britain

Henry Barnbrock, Jr., in Political Economy

Thesis: Italians in Madison

Harry Ellis Benedict, in Commerce

Thesis: The labor problem of railroads

Franklin Blevins Bogart, in Bacteriology

Thesis: The bacteriology of the Madison water supply and its dis-
tribution through the bubble fountain

Laura Hanes Cadwallader, in History

Thesis: The relations of Queen Elizabeth with the freebooters

Lyle Coryell Clarke, in Commerce

Thesis: What Wisconsin newspapers should charge for advertising

Robert John Cunningham, in Political Science

Thesis: An investigation of the organization of the courts of Wis-
consin

† Degree conferred March 1, 1916.

- Ann Elizabeth Edwards, in Botany
 Thesis: A comparison of the rates and direction of absorption in various commercial woods when immersed in water
- George W. Haverstick, in Chemistry
 Thesis: Application of the Van't Hoff equation to the determination of the heat of vaporization of mixed liquids
- Mary Hemenway, in Latin
 Thesis: Lucretius' theory of the development of man in civilization
- Laura Roe Mills, in English
 Thesis: Nietzsche's superman and Carlyle's hero—a contrast
- Bernard Christian Mueller, in Political Economy
 Thesis: The mail order lumber business
- Edna Marie Nagle, in Latin
 Thesis: The banquet satires of the Romans
- Harriet Eastabrooks O'Shea, in Education
 Thesis: Measurement of intelligence in school children
- Louis Rosenberg, in Chemistry
 Thesis: The composition of washing powders
- Omar T. Sadler, in Manual Arts
 Thesis: Adapting elementary school courses to the child who does not finish the high school
- Edith Lucile Sharkey, in German
 Thesis: The religious and ethical thought of Gustav Freussen
- Fred Walter Stadelbauer, in Political Economy
 Thesis: Economic legislation in Germany on account of the English blockade in 1914-1915
- Joseph Vincent Taylor, in Physiology
 Thesis: The effect of autolysis reaction on liver
- Lyman Case Ward, in History
 Thesis: Anglo-French diplomatic relations, 1880-1904

College of Agriculture

- Murray Reid Benedict, in Farm Management (Agr. Economics)
 Thesis: A study of the influence of cash crops upon the farm business
- Florence Marie Ely, in Home Economics
 Thesis: A study of the factors causing shrinkage in woolen cloth
- Mary Grace Godfrey, in Home Economics
 Thesis: The effect of superheated fat upon digestion
- Gail Wesley Palmer, in Agricultural Engineering
 Thesis: A study of the effect of the timing of the spark and the exhaust valve under various loads on the full consumption in the farm type of gas engine
- †Charles S. Reddy, in Plant Pathology
 Thesis: Preliminary report on bacterial blight of barley
- Jacob Rovner, in Agricultural Bacteriology
 Thesis: The degree of accuracy in determining the number of bacteria in milk by the standard methods
- Oscar John Sieker, in Agronomy
 Thesis: A study of the percentage of meat to hull of Wisconsin pedigreed oats

† Degree conferred March 1, 1916.

Peter Carl Strehlow, in Animal Husbandry

Thesis: Breeding records of the university swine herd for the seasons of 1915 and 1916

Barnett Sure, in Agricultural Chemistry

Thesis: The relation of amide nitrogen to the nitrogen metabolism of the pea plant

Horace Warner Truesdell, in Agricultural Bacteriology

Thesis: The effect of phosphorus upon alfalfa and alfalfa bacteria

Sarah Elizabeth Warwick, in Home Economics

Thesis: Department store organization and management

Law School

Edmond Galbraith Toomey

Thesis: Reform in civil pleading and practice

STUDENTS

GRADUATES

The Albert Markham Memorial Graduate Traveling Fellowship

Awarded for excellence in language and literature

*SARAH MOREHOUSE BEACH, Ph. D. (University of Wisconsin), in German and English

*LUCY GEORGE ROBERTS, Ph. D. (University of Wisconsin), in Latin and Greek

Fellows and Scholars

Armstrong, Robert Douglas	<i>Indianapolis, Ind.</i>
B. A., Indiana University	Scholar in Political Science
Bannen, Dorothy Agnes	<i>Milwaukee</i>
B. A., University of Wisconsin	Teaching Fellow in History
Baum, Harry Neal	<i>Madison</i>
M. A., University of Wisconsin	Fellow in European History
†Benger, Ernest Baden	<i>Madison</i>
M. S., University of Wisconsin	Honorary Fellow in Chemistry
Black, John Donald	<i>Madison</i>
M. A., University of Wisconsin	Fellow in Political Economy
Blosser, Christian B.	<i>Elkhart, Ind.</i>
B. A., Indiana University	Scholar in Horticulture
Boortz, Harvey Edward	<i>Waukesha</i>
B. A., Carroll College	Carroll College Scholar (German)
Briggs, Mitchell Pirie	<i>Le Mars, Iowa</i>
B. A., Morningside College	Scholar in American History
Browning, Harold William	<i>Madison</i>
M. S., University of Wisconsin	Fellow in Botany
Brunelle, Augustus Hall	<i>Madison</i>
M. A., University of Wisconsin	Fellow in Latin
Comstock, Mary Cecelia Everette t c	<i>Madison</i>
B. A., University of Wisconsin	Scholar in Romance Languages

*Not included in total.

†Appointment for the second semester, 1916-17.

Coulter, Ellis Merton		<i>Connelly Springs, N. C.</i>
M. A., University of Wisconsin	Fellow in American History	
Crafts, Florence Kate		<i>Bradford, Vt.</i>
B. A., Smith College	Fellow in Greek	
Dietz, Lorna		<i>Milwaukee</i>
B. A., Milwaukee-Downer College		
	Milwaukee-Downer Scholar (Political Economy)	
*Doolittle, Sears Polydore		<i>Chicago, Ill.</i>
M. S., Michigan Agricultural College		
	Research Fellow in Plant Pathology	
Du Mez, Andrew Grover		<i>Madison</i>
M. S., University of Wisconsin	Honorary Fellow in Pharmacy	
Eicke, Wilmer Hughes		<i>Narragansett Pier, R. I.</i>
B. A., Brown University	Henry Gund Scholar in German	
*Flint, Rebecca Punchard t c		<i>Madison</i>
B. A., Wellesley College	Fellow in Romance Languages	
Fowler, Mary Lucile		<i>Fond du Lac</i>
B. A., University of Wisconsin	Teaching Fellow in English	
Garnett, William Edward		<i>Charlottesville, Va.</i>
M. A., Peabody Teachers College	Scholar in Political Economy	
Ge'sler, Clifford Franklin		<i>Bangor</i>
B. A., Milton College	Milton College Scholar (English)	
Gibbs, William Merriott		<i>Madison</i>
M. S., University of Wisconsin		
	Fellow in Agricultural Bacteriology	
Giddings, Nahum James		<i>Morgantown, W. Va.</i>
M. S., Vermont College	Honorary Fellow in Plant Pathology	
Gustafson, Edgar Harold		<i>Hannaford, N. Dak.</i>
M. A., University of North Dakota	Fellow in Political Economy	
Hageman, Aaron Martin		<i>Bund Brook, N. J.</i>
M. S., Rutgers College	Fellow in Chemistry	
Higgins, Irene		<i>Eagle River</i>
B. A., University of Wisconsin	Teaching Fellow in History	
Hodgson, Roberta		<i>Athens, Ga.</i>
M. A., University of Wisconsin	Fellow in Sociology	
Holmes, Clarence Leroy		<i>Madison</i>
B. A., University of Michigan	Fellow in Agricultural Economics	
Homann, Frederic Adolf		<i>New Braunfels, Tex.</i>
B. S., Agricultural and Mechanical College of Texas		
	Scholar in Steam and Gas Engineering	
Hougen, Olav Andreas		<i>Madison</i>
B. S., University of Washington	Fellow in Chemical Engineering	
Hoyer, Theodore Robert		<i>Milwaukee</i>
B. A., University of Wisconsin		
	Mary M. Adams Fellow in English	
Hunt, Richard Nash		<i>Madison</i>
B. A., University of Wisconsin	Scholar in Geology	
†Jenkins, James Francis		<i>Berlin</i>
B. A., University of Wisconsin	Fellow in Romance Languages	

*Appointment for the second semester, 1916-17.

†Resigned February 24, 1917.

*Johnson, Harlan Woodbridge	<i>Ames, Ia.</i>
M. S., Iowa State College	Scholar in Agricultural Bacteriology
Lehman, Elmer Ernest	<i>Wakarusa, Ind.</i>
B. A., Goshen College	Scholar in Agricultural Education
Lundy, Gabriel	<i>Grand Forks, N. Dak.</i>
B. S., North Dakota Agricultural College	Scholar in Political Economy
MacInnis, Earl C.	<i>Oshkosh</i>
B. A., Lawrence College	Lawrence College Scholar in Political Economy
Merrill, Henry Baldwin	<i>St. Paul, Minn.</i>
B. S., University of Wisconsin	Scholar in Chemistry
Merritt, John Wesley	<i>Hanover, N. H.</i>
M. S., Northwestern University	Fellow in Geology
*Michael, Louis Guy	<i>Hastings, Mich.</i>
B. S., Michigan Agricultural College	Honorary Fellow in Experimental Breeding
†Moore, Roger Emmett	<i>Madison</i>
M. S., University of Wisconsin	Fellow in Mathematics
Morris, Harry Elwood	<i>Bozeman, Mont.</i>
B. S., Montana State College	Honorary Fellow in Botany
Mulholland, Lionel George	<i>Riverside, N. J.</i>
B. S., Delaware College	Scholar in Dairy Husbandry
Nelson, Thurlow Christian	<i>Madison</i>
B. S., Rutgers College	Fellow in Zoology
Pearce, Rufus Burleson	<i>Richland, Tex.</i>
B. S., Agricultural and Mechanical College of Texas	Scholar in Civil Engineering
†Rands, Robert Delafield	<i>Lincoln, Neb.</i>
M. S., University of Wisconsin	Scholar in Plant Pathology
Roberts, Harold Stine	<i>Merchantville, N. J.</i>
M. A., Princeton University	Fellow in German
Sanders, Shipp Gillespie	<i>Georgetown, Tex.</i>
M. A., Princeton University	Charles Kendall Adams Fellow in Greek
Schwarz, Leonard John	<i>Chilton</i>
B. S., University of Wisconsin	Hollister Fellow in Pharmacy
Seeberg, Elizabeth Alexandra t c	<i>Milwaukee</i>
M. A., University of Wisconsin	Fellow in Psychology
Smith, Cora Davis	<i>Green Bay</i>
B. A., Ripon College	Ripon College Scholar (Latin)
Strong, John Stoughton	<i>Albion, Mich.</i>
B. A., Albion College	Fellow in Physics
Sutherland, Brenda	<i>Melbourne, Australia</i>
M. S., University of Melbourne	Fellow in Home Economics
Swanzy, Ruth Ellen	<i>Beloit</i>
B. A., Beloit College	Beloit College Scholar (History)

*Appointment for the second semester, 1916-17.

†Resigned February, 1917.

Swenson, Rinehart John	Radcliffe, Iowa
M. A., University of Minnesota	Fellow in Political Science
*Tisdale, Wendell Holmes	Madison
M. S., University of Wisconsin	
†Tisdale, William Burley	Horlick Scholar in Plant Pathology
B. S., Alabama Polytechnic Institute	Bluff Springs, Fla.
	Horlick Scholar in Plant Pathology
Titchener, Margaret Seymour	Ithaca, N. Y.
B. A., Wells College	Scholar in Latin and Greek
†Titus, Esbon Yokum	Madison
M. A., University of Colorado	Honorary Fellow in Chemistry
Tompkins, Miriam Downing t c	Wauwatosa
B. A., University of Wisconsin	Scholar in English
Van Landegend, Edward	Madison
B. A., University of Michigan	Fellow in Education
Wakeman, Caroline Alice	Chicago, Ill.
Ph. B., University of Chicago	Scholar in European History
‡Walsh, Joseph Leonard	Calonsville, Maryland
B. S., Harvard University	Honorary Fellow in Mathematics
White, Horace Loring	Fargo, N. Dak.
M. A., Columbia University	
	Honorary Fellow in Agricultural Chemistry
Wilkinson, John Butler	Madison
B. S., University of Wisconsin	Fellow in Mechanical Engineering

Other Graduates

Aagaard, Arthur Hildeman	Madison
B. S., University of Illinois	Chemistry
Abbott, Roy Linn	Conesville, Iowa
B. A., Iowa State Teachers' College	Plant Pathology
Albert, Arthur Robert	Madison
B. S., University of Wisconsin	Soils
Alderman, William E.	Madison
M. A., Hiram College	English
Anderson, Achsah Cornelia	Milwaukee
B. A., University of Wisconsin	History
Anderson, Frank Clinkscales	Centreville, S. C.
B. S., Clemson College	Agronomy
Angel, William Piper	Madison
M. A., University of Tennessee	Physics
Armstrong, George Miller	Madison
B. S., Clemson College	Botany
Atkinson, Charles Otto	Rockport, Ind.
B. A., Indiana University	Botany
Atwood, Marion John	Madison
M. A., University of Wisconsin	Political Science

*Resigned January 30, 1917.

†Appointed for the second semester, 1916-17

‡Appointed December 18, 1916

Avery, William Donald	Hampton, Iowa
B. A., Grinnell College	Political Science
Babcock, Rodney Whittemore	Madison
M. A., University of Wisconsin	Mathematics
Bachhuber, Leo John m	Mayville
M. S., University of Wisconsin	Experimental Breeding
Bain, Edgar Collins	Ashmun, Ohio
M. S., Ohio State University	Chemical Engineering
Baird, Edgar Alan	Madison
M. A., University of Wisconsin	Botany
Baldwin, Isabella Nancy	Washington, D. C.
B. A., Goucher College	English
Barker, Henry D.	Mountain Rest, S. C.
B. S., Clemson College	Agronomy
Barnes, Robert James	Menasha
B. A., Lawrence College	Latin
Barr, Walter James	Madison
B. A., Wabash College	Physics
Bateman, Ernest	Madison
Ph. B., Yale University	Chemistry of Forest Prod
Bean, Ernest F.	Madison
M. A., University of Wisconsin	Geology
Beaubien, Edith Nell	Lamar, Colo.
B. S., Kansas State Agricultural College	Home Economics
Becker, Joseph Aloysius	Madison
M. S., University of Wisconsin	Agricultural Economics
Benger, Ernest Baden	Madison
M. S., University of Wisconsin	Chemistry
Bennett, James Percy	Madison
M. A., University of Missouri	Botany
Berghoff, Clement Anthony	Chicago, Ill.
B. A., Campion College	Political Economy
Bing, Phil C.	Madison
B. A., Miami College	Journalism
Binney, Morgan Thompson	Milwaukee
B. S., Kansas Agricultural College	Plant Pathology
Bishop, George Holman	Madison
B. A., University of Michigan	Zoology
Bishop, George Marsters	Madison
B. S., University of Wisconsin	Chemistry
Blanchard, William Oscar	Oshkosh
Ph. B., University of Wisconsin	Geography
Bloch, Louis	Madison
B. A., University of Wisconsin	Political Economy
Bogart, Franklin Blevins m	Madison
B. S., University of Wisconsin	Pathology
Bohn, Ralph Maxwell	Madison
B. S., University of Wisconsin	Agricultural Chemistry
Bohnson, Van Lorens	Madison
M. S., University of Wisconsin	Chemistry
Borsack, Karl Kasper m	Fond du Lac
B. A., University of Wisconsin	Medicine

Bosworth, Lloyd Athel	Madison
B. S., University of Wisconsin	Chemistry
Bo ulware, Lemuel Ricketts	Springfield, Ky.
B. A., University of Wisconsin	Political Economy
Boyer, DeWitt Angus	Springfield, Utah
B. A., University of Utah	Public Speaking
Bradley, Robert Foster, Jr.	Madison
M. A., University of South Carolina	French
Brandt, Walther I.	Macfarland
B. A., Luther College	American History
Brann, Albert	Madison
M. A., University of Wisconsin	Chemistry
Brann, John William	Baileys Harbor
M. S., University of Wisconsin	Plant Pathology
Breckon, William Darche	Oconomowoc
B. S., Toronto University	Agricultural Economics
Brenneman, William Dwight	Oregon
B. A., Mount Union College	Political Economy
Brookins, Julia Louis Clarke	Madison
M. A., University of Wisconsin	Political Economy
Brown, Mabel Mary	Platteville
M. A., University of Wisconsin	Botany
Brye, Edwin S.	Minnewaukaw, N. Dak.
B. A., Red Wing Seminary	Sociology
Buell, Mary Van Rensselaer	Madison
M. A., University of Wisconsin	Agricultural Chemistry
Burdick, Allison Lovelle	Milton
B. A., Milton College	Anatomy
Butler, Lee Wright	Madison
B. A., Simpson College	Physics
Cahn, Alvin Robert	Chicago, Ill.
M. S., University of Wisconsin	Zoology
Calderwood, Howard Newton, Jr.	Madison
B. S., University of Kansas	Chemistry of Forest Products
Calkins, Audley Berlyn	Wayland, Mich.
B. A., Hillsdale College	English
Campbell, Meridith Fairfax m	Madison
B. S., University of Wisconsin	Pathology
Campbell, Rachel Mary	Milwaukee
B. S., University of Chicago	Education
Cantu, Abel	Madison
B. A., William Jewell College	Spanish
Carncross, Elmer Aeneas	Madison
B. S., University of Wisconsin	Agricultural Economics
Carpenter, Otto F.	Belleville, Mich.
B. A., Ohio Northern University	Political Economy
Carsner, Eubanks	Victoria, Tex.
M. S., University of Wisconsin	Plant Pathology
Cave, Lo Ree	Hays, Kans.
B. A., Kansas State Agricultural College	Home Economics
Chamberlain, Ernest Barrett	Madison
M. A., B. D., Oberlin College	Medieval History

Charlton, Alice Grace	<i>Milwaukee</i>
B. A., Wellesley College	Agricultural Bacteriology
Cheyney, Alice Squires	<i>Philadelphia, Pa.</i>
M. A., Bryn Mawr College	Political Economy
Childs, Edward Powell	<i>Madison</i>
B. S., Denison University	Education
Clark, Emily Ethel	<i>Madison</i>
B. A., University of Wisconsin	Political Economy
Clemens, Cecil Arthur	<i>Sioux Falls, S. Dak.</i>
B. A., South Dakota University	Chemistry
Cleveland, William Roy	<i>Madison</i>
B. S., Kansas State Manual Training Normal	Chemistry of Forest Products
Clifford, Charles William	<i>Madison</i>
M. S., University of Wisconsin	Chemistry
Cole, Archie Evans	<i>Plymouth, Ohio</i>
B. A., Ohio Wesleyan University	Zoology
Conrad, Elizabeth	<i>Madison</i>
M. A., University of Wisconsin	French
Conrad, Sara Eugenia	<i>Madison</i>
M. A., University of Wisconsin	
Conrey, Guy W.	<i>Madison</i>
M. A., University of Michigan	Soils
Cook, Guy Shimer	<i>Madison</i>
B. A., University of Missouri	Physics
Corbett, Gertrude Marion	<i>Milwaukee</i>
B. A., University of Wisconsin	Political Economy
Courtney, Alden Key	<i>Pettus, Tex.</i>
B. S., Agricultural and Mechanical College, Texas	Economic Entomology
Cowles, May Louise	<i>Sibley, Kans.</i>
B. S., Kansas State Agricultural College	Home Economics
Coxen, James Reason t c	<i>San Marcos, Tex.</i>
B. S., Kansas State Agricultural College	Manual Arts
Crandall, George Herbert	<i>Milton</i>
B. A., Milton College	Zoology
Crane, Alice Whittaker	<i>Brookline, Mass.</i>
B. A., University of Wisconsin	Philosophy
Crawford, Finla Goff	<i>Cameron Mills, N. Y.</i>
M. A., University of Wisconsin	American History
Crothers, Harold Marion	<i>Madison</i>
E. E., University of Wisconsin	Electrical Engineering
Curley, Ethel Delia	<i>Idaho Falls, Idaho</i>
B. A., Vassar College	Medical Bacteriology
Dadisman, Andrew Jackson	<i>Morgantown, W. Va.</i>
M. S., Cornell University	Agricultural Economics
Dahm, Thomas Matthew	<i>McGregor, Iowa</i>
M. A., Northwestern University	Physics
Davies, Ethel Elizabeth	<i>Barberton, Ohio</i>
Ph. B., University of Akron	Home Economics
Davis, Melvin Knolen	<i>Bedford, Ind.</i>
M. A., University of Wisconsin	Geology

- Degeler, Alida
 M. A., University of Wisconsin
 Dexter, Elise Forsythe
 M. A., University of Wisconsin
 Dickson, James Geere
 B. S., Washington State College
 Dixon, Esther Margaret
 M. A., University of Wisconsin
 Doherty, John Andrew
 B. A., Harvard University
 Dooley, Mabel
 M. A., University of Wisconsin
 Drescher, Henry Adolph
 M. S., University of Wisconsin
 Du, Chuin
 B. A., Baldwin-Wallace College
 Dunnewald, Theodore John
 M. S., University of Wisconsin
 Eagan, Joseph Bernard
 B. A., University of Wisconsin
 Eberle, George Jacquin
 B. A., University of Wisconsin
 Eggleston, George Konti
 B. A., Lawrence College
 Elliott, Charlotte
 M. A., Leland Stanford University
 Elliott, Helen Frances
 B. A., St. Clara College
 Ellis, Mattie Cook
 Winona, Minnesota, Normal
 Elmendorf, Armin
 B. S., University of Illinois
 Emsley, Bert
 B. A., Harvard University
 Erdmann, Henry Ernst
 B. S., South Dakota State College
 Essinger, Anna

 Etheridge, Jesse I.
 B. S., University of Wisconsin
 Evans, Augusta Dillman
 B. A., Smith College
 Ewing, Harry Earnest
 B. A., University of Colorado
 Field, Albert Martin
 B. S. University of Wisconsin
 Finnegan, Robert Charles m
 B. A., Ripon College
 Finner, Paul Frederick
 M. A., University of Chicago
 Fluke, Charles Lewis, Jr.,
 B. S., Colorado Agricultural College
- Milwaukee*
 French
 Madison
 German
 North Yakima, Wash.
 Botany
 Madison
 Spanish
 Dorchester, Mass.
 Sanitary Engineering
 Knoxville, Tenn.
 English
 Sun Prairie
 Agricultural Chemistry
 Honan, China
 Political Economy
 Madison
 Soils
 Avoca
 Commerce
 Madison
 Political Economy
 Dallas
 Philosophy
 Dell Rapids, S. Dak.
 Plant Pathology
 Superior
 History
 Austin, Minn.
 American History
 Madison
 Mathematics
 Methuen, Mass.
 English
 Mitchell, S. Dak.
 Agricultural Economics
 Madison
 German
 Madison
 Animal Husbandry
 Frackville, Pa.
 Home Economics
 Buenos Aires, Argentine
 Political Economy
 Madison
 Agronomy
 La Valle
 Anatomy
 Dodge
 Education
 Grand Junction, Colo.
 Economic Entomology

Forster, Garnet Wolsery	<i>Wrentham, Mass.</i>
B. S., Cornell University	Agricultural Economics
Forster, George Francis	<i>Hawks Park, Fla.</i>
B. A., Emory University	Zoology
Foster, Leighton George	<i>Madison</i>
M. A., University of Wisconsin	Agricultural Economics
Frenzel, Harry Horton	<i>Sentinel, Okla.</i>
B. S., Oklahoma Agricultural and Mechanical College	Structural Engineering
Frey, Charles N.	<i>Caledonia, Mich.</i>
M. S., University of Wisconsin	Botany
Fulmer, Henry L.	<i>Batesburg, S. C.</i>
M. S., University of Wisconsin	Agricultural Bacteriology
Gardner, Max William	<i>Madison</i>
M. S., University of Wisconsin	Plant Pathology
Gaylord, Joseph S.	<i>Madison</i>
M. A., Harvard University	Philosophy
Geib, Horace Valentine	<i>Caledonia, Mich.</i>
B. S., Michigan Agricultural College	Soils
Gentner, Louis Gustave	<i>Portland, Ore.</i>
B. S., Oregon Agricultural College	Economic Entomology
Gerry, Eloise	<i>Madison</i>
M. A., Radcliffe College	Botany
Gibbens, Olga Charlotte	<i>Madison</i>
B. A., Fairmount College	German
Giessing, Charles Paul	<i>Brooklyn, N. Y.</i>
M. A., Cornell University	German
Gillette, Paul Clifford	<i>Madison</i>
B. S., Agricultural and Mechanical College of Texas	Hydraulic Engineering
Gilman, Laura Leonard	<i>Madison</i>
B. A., University of Wisconsin	Medical Bacteriology
Glaeser, Martin Gustave	<i>Sheboygan</i>
B. A., University of Wisconsin	Political Economy
Goodrich, Helen Hazel	<i>Ripon</i>
B. A., Ripon College	English
Goss, Robert Whitmore	<i>Fall River, Mass.</i>
M. S., Michigan Agricultural College	Plant Pathology
Graul, Edward John	<i>Independent</i>
B. S., University of Wisconsin	Soils and Bacteriology
Gray, Rena	<i>Arlington, Mass.</i>
B. S., Simmons College	Home Economics
Greenleaf, Charles Hunt	<i>Madison</i>
M. A., University of Wisconsin	Romance Languages
Greenslade, Grover Rawle	<i>Madison</i>
M. A., University of Washington	Physics
Griffin, Clara Adelaide	<i>Madison</i>
B. A., Wellesley College	Journalism
Guessford, Ora Ferne	<i>Des Moines, Iowa</i>
B. A., Drake University	Sociology
Gugler, Milton Clarence	<i>Chapman, Kans.</i>
B. A., Washburn College	Botany

Gunn, Reuben V.	<i>Madison</i>
B. S., University of Wisconsin	Agricultural Economics
Haake, Alfred Paul	<i>Madison</i>
M. A., University of Wisconsin	Political Economy
Hall, Nelson Clarence	<i>Franklin, Ind.</i>
B. A., Franklin College	Political Economy
Hanson, Lewis Peter	<i>Madison</i>
B. S., University of Wisconsin	Agricultural Chemistry
Hartman, Russell Edwin	<i>Madison</i>
M. S., University of Wisconsin	Plant Pathology
Harvey, Paul Atwood	<i>Cashmere, Wash.</i>
B. S., Oregon Agricultural College	Botany
Hastings, Henry Panet	<i>Hartford, Conn.</i>
M. A., University of Wisconsin	Chemistry of Forest Products
Haviland, Dora	<i>Janesville</i>
B. S., University of Wisconsin	Mathematics
Hawthorn, Horace Boies	<i>Castana, Iowa</i>
M. S., Iowa State College	Sociology
Hayden, Mary Marella t c	<i>Madison</i>
Ph. B., University of Wisconsin	History
Hayes, Augustus Washington	<i>Pleasant Plains, Ill.</i>
M. S., University of Wisconsin	Agricultural Economics
Haymaker, Herbert Henley	<i>Wichita, Kans.</i>
B. S., Kansas Agricultural College	Plant Pathology
Heddle, John Ronald	<i>Madison</i>
B. A., University of Wisconsin	Botany
Henning, Oscar A.	<i>Hamburg, Mo.</i>
M. A., Central Wesleyan College	German
Herreid, Cecelia	<i>Madison</i>
B. A., University of Wisconsin	Botany
Hester, Charles Floyd	<i>Mondovi</i>
B. A., Oberlin College	Political Economy
Hetherington, Daisy Alford	<i>Madison</i>
B. A., University of Wisconsin	Education
Hibbard, Clarence Addison	<i>Madison</i>
B. A., University of Wisconsin	English
Hills, Thomas Lawrence	<i>Burlington, Vt.</i>
M. S., University of Wisconsin	Agricultural Bacteriology
Hintzman, William Frederick	<i>Madison</i>
B. A., University of Wisconsin	Sociology
Hoag, Charles Dodge	<i>Madison</i>
B. S., University of Wisconsin	Agricultural Economics
Hookey, Osborne Edward	<i>Milwaukee</i>
M. A., University of Wisconsin	American History
Hoover, William H.	<i>Delphi, Ind.</i>
M. A., University of Wisconsin	Physics
Hopkins, Ada	<i>Madison</i>
B. A., University of Wisconsin	Romance Languages
Hopkins, Edward Stanley	<i>Vermilion, Alta, Can.</i>
B. S. A., Toronto College	Soils
Howard, Neale Frederic	<i>Milwaukee</i>
B. S., University of Wisconsin	Economic Entomology

Hoyord, Walter E.	<i>Scandinavia</i>
B. S., University of Wisconsin	<i>Agronomy</i>
Hull, Clark Leonard	<i>Madison</i>
M. A., University of Wisconsin	<i>Psychology</i>
Hungerford, Charles William	<i>Madison</i>
M. S., University of Wisconsin	<i>Plant Pathology</i>
Hunt, William Edwin m	<i>Chuchow, China</i>
B. S., Hiram College (Ohio)	<i>Anatomy</i>
Huser, Francis Edward	<i>Cumberland</i>
B. S., University of Wisconsin	<i>Agriculture</i>
Hwang, Lin	<i>Honan, China</i>
B. S., Baldwin-Wallace College	<i>Political Economy</i>
Inomata, Tsunao	<i>Nagaokashi, Japan</i>
B. A., Waseda College	<i>Agricultural Economics</i>
Iversen, Ingeborg Marie	<i>Stoughton</i>
B. S., University of Wisconsin	<i>English</i>
Jackson, Alice Fanny	<i>Madison</i>
B. L., University of Wisconsin	<i>Home Economics</i>
Jackson, Charles A.	<i>Madison</i>
B. S., University of Wisconsin	<i>Agronomy</i>
Jameson, Raymond Delos	<i>Madison</i>
B. A., University of Wisconsin	<i>German</i>
Jerome, Gladys Solomon	<i>Madison</i>
M. A., University of Wisconsin	<i>English</i>
Jerome, Harry	<i>Madison</i>
M. A., University of Wisconsin	<i>Political Economy</i>
Johnson, Alfred Julius	<i>Stanley</i>
B. S., University of Wisconsin	<i>Chemistry</i>
Johnson, Arthur Lowell	<i>Granville, Ohio</i>
B. A., B. S., Denison University	<i>Physics</i>
Johnson, Henry	<i>Milwaukee</i>
B. A., Lawrence College	<i>Political Economy</i>
Johnson, James	<i>Madison</i>
M. S., University of Wisconsin	<i>Plant Pathology</i>
Jones, Fred Reuel	<i>Madison</i>
M. S., University of Wisconsin	<i>Plant Pathology</i>
Jones, Hugh M.	<i>Madison</i>
B. S., University of Wisconsin	<i>Agronomy</i>
Jones, Sarah Van Hoosen	<i>Chicago, Ill.</i>
M. S., University of Wisconsin	<i>Experimental Breeding</i>
Karlson, Erick Hjalmar	<i>Madison</i>
B. A., Augustana College	<i>Philosophy</i>
Kinne, Burdette Ingersoll	<i>Madison</i>
M. A., University of Wisconsin	<i>French</i>
Kinney, Samuel Marks	<i>Madison</i>
B. A., Oberlin College	<i>Political Economy</i>
Kitchel, Anna Theresa	<i>Milwaukee</i>
M. A., University of Wisconsin	<i>English</i>
Knaplund, Paul	<i>Madison</i>
M. A., University of Wisconsin	<i>English History</i>
Kranz, Hermann Ernest	<i>Madison</i>
B. S., University of Wisconsin	<i>Electrical Engineering</i>

Kratsch, Edmund Charles	<i>Milwaukee</i>
B. A., University of Wisconsin	<i>English</i>
Krueger, Frederick Oscar	<i>Groton, S. Dak.</i>
B. A., University of South Dakota	<i>Animal Husbandry</i>
Krueger, Jean	<i>River Forest, Ill.</i>
Ph. B., University of Chicago	<i>Home Economics</i>
Krueger, Leonard Bayless	<i>Muskego</i>
M. A., University of Pennsylvania	<i>Political Economy</i>
Kuhlman, Arthur Henry	<i>Madison</i>
M. S., University of Wisconsin	<i>Experimental Breeding</i>
La Follette, Robert Russell	<i>Shelburn, Ind.</i>
B. A., Indiana State Normal	<i>History</i>
Lammel, Allabelle	<i>Menasha</i>
B. A., Lawrence College	<i>Political Economy</i>
Lange, Ernest Otto Albert	<i>Fond du Lac</i>
B. S., University of Wisconsin	<i>Electrical Engineering</i>
Langenhan, Henry August	<i>Madison</i>
M. S., University of Wisconsin	<i>Pharmacy</i>
Lee, Frederic Collins	<i>Madison</i>
M. A., University of Wisconsin	<i>Chemistry of Forest Products</i>
Li, Pao-lin	<i>Canton, China</i>
Ph. B., University of Chicago	<i>Political Economy</i>
Lippincott, William Adams	<i>Manhattan, Kans</i>
B. S., Iowa State College	<i>Experimental Breeding</i>
Loft, Genivera Edmunds	<i>Madison</i>
M. A., University of Wisconsin	<i>Geography</i>
Loughlin, Rosemary	<i>Madison</i>
B. A., Iowa State University	<i>Home Economics</i>
Lyon, Albert Eddy	<i>Madison</i>
M. A., University of Wisconsin	<i>Spanish</i>
McClanahan, Albion Arthur	<i>Deputy, Ind.</i>
B. A., Indiana Central Normal	<i>Education</i>
MacGregor, Ford Herbert	<i>Madison</i>
M. A., University of Wisconsin	<i>Political Science</i>
McDonald, Philip Walter	<i>Winnipeg, Canada</i>
M. A., University of Wisconsin	<i>History</i>
MacNaughton, Leslie m	<i>Argyle, N. Y.</i>
B. S., University of Wisconsin	<i>Anatomy</i>
McKay, John Gordon I	<i>Madison</i>
B. A., University of Wisconsin	<i>Political Economy</i>
McKinley, Charles	<i>Madison</i>
M. A., University of Wisconsin	<i>Political Science</i>
McMillin, Midge	<i>LaFayette, Ind.</i>
B. A., Indiana University	<i>English</i>
Major, David Maggard	<i>Madison</i>
B. A., Texas Polytechnic	<i>Latin</i>
Malone, Julian Yerkes m	<i>Ripon</i>
B. A., Ripon College	<i>Pharmacology and Toxicology</i>
Manning, Hazel	<i>Madison</i>
B. S., University of Wisconsin	<i>Political Economy</i>
Markham, Lucius Alonzo	<i>Janesville</i>
B. A., Fairmount College	<i>Agriculture</i>

Martin, Albert Pray	<i>Pawtucket, R. I.</i>
M. A., University of Wisconsin	German
Mathie, Edward Joseph	<i>Stevens Point</i>
B. A., University of Wisconsin	Sociology
Meacham, Merle Robert	<i>Ravenna, Ohio</i>
Ch. E., Purdue University	Chemistry of Forest Products
Mehl, Paul	<i>Madison</i>
B. S., Oregon Agricultural College	Agricultural Economics
Meuer, Helen Alma	<i>Madison</i>
B. A., University of Wisconsin	<i>Madison</i>
Miller, Henry George	Agricultural Chemistry
M. S., University of Wisconsin	<i>Madison</i>
Miller, Maude	Botany
B. A., University of Wisconsin	<i>Madison</i>
Miller, Sidney Lincoln	Political Economy
M. A., University of Wisconsin	<i>Milwaukee</i>
Mohaupt, Arthur George	Electrical Engineering
B. A., University of Wisconsin	<i>Franklin, Ind.</i>
Moore, Thomas Russell	Commerce
B. S., Franklin College	<i>Madison</i>
Morris, Harold Hulett	Chemistry
M. A., University of Wisconsin	<i>Madison</i>
Mortimer, George B.	Agronomy
B. S., University of Wisconsin	<i>Princeton</i>
Mueller, Norbert Robert	Pharmacy
M. S., University of Wisconsin	<i>Niagara Falls, N. Y.</i>
Murphey, Hermon King	History
M. A., Harvard University	<i>Shenandoah, Iowa</i>
Murphy, Ella McCulloch	English
B. A., Smith College	<i>Madison</i>
Mussehl, Frank Edward	Agricultural Chemistry
B. S., University of Wisconsin	<i>Madison</i>
Nebel, Walter	Chemistry
M. S., University of Wisconsin	<i>Green's Fork, Ind.</i>
Neff, Shannon D.	History
B. A., Earlham College	<i>Madison</i>
Negley, Noel Ardis	Animal Husbandry
B. A., University of Nebraska	<i>Madison</i>
Nelson, Karl Oscar	Psychology
B. A., Bethany College	<i>Madison</i>
Nelson, Victor Emanuel	Agricultural Chemistry
M. S., University of Wisconsin	<i>Madison</i>
Neubert, Armin Karl	Agricultural Engineering
B. S., University of Wisconsin	<i>Madison</i>
Neumann, John Xavier	Medical Bacteriology
B. S., University of Wisconsin	<i>Madison</i>
Nichols, Fred Clifford	Physics
B. A., Wabash College	<i>Madison</i>
Nichols, Merle Starr	Physiological Chemistry
B. S., University of Wisconsin	<i>Belle Plaine</i>
Ninman, Herman John	Plant Pathology
B. S., University of Wisconsin	

Noble, George Bernard
B. A., Oxford University

Noer, Oyvind Juul
B. S., University of Wisconsin

Odegard, Sigurd Louis
B. A., University of Wisconsin

Oldenburg, Frederic William H.
B. S., University of Wisconsin

O'Malley, Agnes Elizabeth
B. A., University of Wisconsin

Ortega, Joaquin

Orvis, William
B. A., Ripon College

O'Shea, Harriet Eastabrooks
B. A., University of Wisconsin

Paine, George Porter
M. A., Harvard University

Palmer, Stella
M. A., Columbia University

Pardee, Mary Bockes
B. A., University of Chicago

Parker, Amy
B. A., University of Wisconsin

Peters, Mabel Charlotte
B. S., Iowa State College

Petersen, Max Heinrich
M. A., Northwestern University

Peterson, Oscar John
B. A., Kalamazoo College

Piggins, Ralph Sproule m
B. A., University of Wisconsin

Pinney, George Graham
B. A., University of Minnesota

Pitz, Walter
B. S., University of Wisconsin

Plunkett, Charles Tuck
M. A., Harvard University

Potter, George Frederick
M. S., University of Wisconsin

Prine, Charles Wilson
B. S., Denison University

Pugh, Grace Madeline
B. A., University of Wisconsin

Raddatz, William Godfrey
M. A., Lawrence College

Ramenstein, Leroy Prince
B. A., Wabash College

Raney, William Francis
B. A., Oxford University

Reece, Richard Herb
B. S., Kansas Agricultural College

Portland, Oregon
Political Science
Stoughton
Chemistry
Madison
Political Economy
Madison
Agronomy
Madison

Madrid, Spain
Romance Languages
Ripon
Physics
Madison
Education
Madison
Physics
Montevallo, Ala.
Education
Madison
Agriculture
Fennimore
English
Sac City, Iowa
Home Economics
Dundee, Ill.
Physics
Manistique, Mich.
Mathematics
Milwaukee
Medical Bacteriology
Sturgeon Bay
Education
Manitowoc
Agricultural Chemistry
Cambridge, Mass.
Romance Languages
Madison
Horticulture
Madison
Physics
Madison
Mathematics
Madison
Sociology
Chicago, Ill.
Physics
Hastings, Nebr.
European History
East Lansing, Mich.
Mathematics

Reynolds, William LaFayette	Buck, Tex.
B. S., Agricultural and Mechanical College of Texas	
Richards, Clarise Audrey	Steam and Gas Engineering
M. A., Miami University	St. Marys, Ohio
Richtmann, William Oscar	Botany
B. S., University of Wisconsin	Madison
Ricker, George Worcester	Pharmacy
B. S., Bowdoin College	Portland, Maine
Ritland, Georgine	European History
B. A., St. Olaf's College	Elroy
Ritter, George J. t c	American History
Ph. B., University of Wisconsin	Madison
Roark, Eugene Washburn	Chemistry
M. S., University of Wisconsin	Madison
Roehm, Hiram Herbert.	Plant Pathology
B. S., University of Wisconsin	Madison
Roelse, Harold V.	Agricultural Bacteriology
B. S., Hastings College	Hastings, Nebr.
Roeseler, Oscar Edwin Siegfried	Political Economy
M. S., University of Wisconsin	Superior
Rosenkrans, Duane B.	Chemistry
B. A., Upper Iowa University	Clemson College, S. C.
Rouse, James Edward	Botany
B. S. A., Kansas State Agricultural College	La Belle, Mo.
Rowe, May Augusta	Experimental Breeding
B. S., Beloit College	Beloit
Runner, Naomi Abbey	Home Economics
B. A., Willamette University	Salem, Ore.
Sands, Albert Theodore t c	English
B. A., University of Wisconsin	Chippewa Falls
Sawtelle, Donald Wing	Physical Education
M. S., University of Wisconsin	Madison
Saxer, Alexander	Agricultural Economics
B. A., St. Gallen, Switzerland	Milwaukee
Scallon, Margaret Agnes	German
M. A., University of Wisconsin	Hancock, Mich.
Schaal, Albert Amiel	English
M. S., University of Wisconsin	Cassville
Schauermann, Karl	Agricultural Chemistry
B. A., University of Wisconsin	Madison
Schersten, Albert Ferdinand	German
M. A., University of Wisconsin	Titusville, Pe.
Schierz, Ernest Rudolf	English
B. S., University of Wisconsin	Madison
Schilletter, August Edward	Chemistry
B. S., Clemson College	Clemson College, S. C.
Schubert, Marguerite Barbara t c	Horticulture
B. A., St. Mary's College	Madison
Schubring, Selma L.	Latin
M. A., University of Wisconsin	Madison

Schweppe, Alfred John	<i>Madison</i>
B. A., University of Wisconsin	English
Scott, Milton Harrison	<i>Sheldahl, Iowa</i>
B. S., Iowa State College	Animal Husbandry
Sevringhaus, Elmer Louis m	<i>New Albany, Ind.</i>
B. A., University of Wisconsin	Medicine
Seybolt, Otilie	<i>Madison</i>
M. A., University of Wisconsin	
Shafer, Maude Margaret Foster	<i>South Milwaukee</i>
Ph. B., University of Wisconsin	English
Shaw, George Robert	<i>Frederick, Md.</i>
M. A., Washington and Lee University	Chemistry
Shepherd, Louise	<i>Madison</i>
B. A., University of Wisconsin	
Simmonds, Nina	<i>Fontana</i>
B. S., University of Wisconsin	Agricultural Chemistry
Simmons, Joseph Ellsworth	<i>Hazel Green</i>
B. S. A., University of Wisconsin	Agricultural Bacteriology
Sister Marie Lillian	<i>Sinsinawa</i>
B. S., St. Clara College	Chemistry
Sister Mary Aquinas	<i>Madison</i>
M. A., University of Wisconsin	Latin
Smelker, William Wallace	<i>New Madison, Ohio</i>
B. S., Ohio State Agricultural College	Agricultural Engineering
Smith, Edith	<i>Port Washington</i>
B. A., University of Wisconsin	
Smith, Howell Kurtz	<i>Madison</i>
B. A., Western Maryland College	Chemistry of Forest Products
Smith, Pearl Mabry	<i>Madison</i>
M. A., University of Wisconsin	Botany
Smithey, William Royall	<i>Roanoke, Va.</i>
M. A., Randolph-Macon College	Education
Snell, Walter Henry	<i>Brockton, Mass.</i>
M. A., Brown University	Plant Pathology
Snyder, Andrew Joseph	<i>Waukesha</i>
B. S., Carroll College	Chemistry
Spahr, Walter E.	<i>Centerville, Ind.</i>
B. A., Earlham College	Political Science
Speicher, Paul	<i>South Bend, Ind.</i>
B. A., Northwestern College	English
Starky, Lawrence Vincent	<i>Platteville</i>
B. S., University of Illinois	Animal Husbandry
Starr, Bertha McClure	<i>Greeley, Colo.</i>
B. A., Colorado State Teacher's College	Home Economics
Steensland, Lohra	<i>Madison</i>
B. A., University of Wisconsin	German
Steigleder, Emil Oscar	<i>Madison</i>
	Experimental Breeding
Stevens, Anna Jessamine	<i>Madison</i>
B. A., University of Wisconsin	Home Economics
Stewart, George Henry	<i>Weoguska, Ala.</i>
B. S., Alabama Polytechnic Institute	Agronomy

Stewart, Harold Wilson	Madison
B. S., University of Illinois	Soils
Stewart, K. Bernice	Madison
B. A., University of Wisconsin	Political Economy
Stone, Morton C.	Madison
B. A., Yale University	Hebrew
Storey, Vernon Madelaine	Red Cloud, Neb.
B. A., University of Nebraska	German
Strowd, Wallace Headen	Madison
M. S., University of Wisconsin	Agricultural Chemistry
Sturtevant, Imogen	Madison
B. A., University of Wisconsin	
Su, Kan	Kwangsi, China
B. S., University of Wisconsin	Hydraulic Engineering
Sure, Barnett	Milwaukee
B. S., University of Wisconsin	Agricultural Chemistry
Swarthout, Edyth Claire m	La Crosse
B. A., University of Wisconsin	Medicine
Sweet, Howard Elliott	Des Moines, Iowa
B. S., Drake University	Chemical Engineering
Swerig, Mabel Beatrice	Madison
B. A., University of Wisconsin	
Szlupas, Keistutis George	Scranton, Pa.
B. S., Pennsylvania State College	Physics
Taylor, Charles Edgar	Colorado Springs, Colo.
B. A., Colorado College	Political Economy
Taylor, Clara Bertram	Madison
B. A., University of Wisconsin	Manual Arts
Taylor, Edward Gordon	Newtonville, Mass.
B. S., Massachusetts Institute of Technology	Physics
Taylor, Ethel Rose	Sioux City, Iowa
M. A., University of Wisconsin	German
Taylor, Joseph Vincent m	Marple, Neb.
B. S., University of Wisconsin	Physiological Chemistry
Taylor, William Halvor	Two Rivers
B. A., Ripon College	Physics
Tetlow, Frances Howard	Madison
B. A., Radcliffe College	Political Economy
Thayer, Florence Adams	Madison
B. A., University of Wisconsin	Botany
Thayer, Vivian Trow	Madison
B. A., University of Wisconsin	Philosophy
Thompson, Henry Walter	Madison
M. A., University of Kansas	Political Science
Tiffany, Jay Miller	Aberdeen, S. Dak.
B. A., University of Wisconsin	Political Economy
Toole, Eben Henry	Madison
M. A., University of Wisconsin	Botany
Trautmann, William John	Madison
Ph. B., University of Wisconsin	Chemistry
Trowbridge, Myrtle	Green Valley, Ill.
B. A., University of Illinois	History

- Trueblood, Charles Kingsley
 M. A., Harvard University
 Turner, Clarence Lester
 M. A., Ohio Wesleyan
 Uber, Harvey August
 Ph. B., University of Wisconsin
 Valentine, Howard DeWitt
 M. S., University of Illinois
 Van Dyke, Madge Patterson to
 B. A., University of Wisconsin
 Van Liere, Edward Jerald m
 B. A., University of Wisconsin
 Vaughan, Floyd Lamar
 M. A., University of Texas
 Vissman, Dorothy B. m
 B. A., Wellesley College
 Wable, George Henry m
 B. A., University of Wisconsin
 Wakefield, Henry Dorr
 B. A., University of Wisconsin
 Walker, John Charles
 M. S., University of Wisconsin
 Wallace, Helen Flint
 B. A., University of Wisconsin
 Wallin, Zenas Beach
 Ph. B., University of Wisconsin
 Walster, Harlow Leslie
 M. A., Harvard University
 Wann, Louis
 M. A., Columbia University
 Waterhouse, Clifford Charles
 B. A., Lawrence College
 Watrud, Hjalmar Oliver
 M. S., University of Wisconsin
 Watson, James Tolmie, Jr.
 B. S., Carleton College
 Weber, Henry Charles cph
 M. D., Marquette University
 Weik, Dorothy Ames
 B. A., DePauw University
 Weiss, Florence Marie
 B. S., University of Wisconsin
 White, David George
 M. F., University of Nebraska
 White, Gertrude Marean
 M. A., University of Wisconsin
 Whitehouse, Herbert
 B. A., University of Wisconsin
 Whitmore, Lester McClellan
 B. S., University of Wisconsin
 Wilde, Frederick Erdman Jesse
 M. A., University of Wisconsin
- Richmond, Ind.*
 English
Milwaukee
 Zoology
Milwaukee
 Geology
River Forest, Ill.
 Chemical Engineering
Kilbourn
 Education
Bristol
 Medicine
Madison
 Political Economy
Louisville, Ky.
 Medicine
Marshfield
 Pathology
Milwaukee
 Geology
Racine
 Plant Pathology
Madison
 French
Spooner
 Agricultural Economics
Spring Green
 Geology
Madison
 English
Weyauwega
 Chemistry
Blanchardville
 Agricultural Economics
International Falls, Minn.
 Physics
Milwaukee
 Public Health
St. Louis, Mo.
 Home Economics
Madison
 Physical Education
Madison
 Political Economy
Elmira, N. Y.
 Zoology
Markesan
 Sociology
Madison
 Agricultural Chemistry
Madison
 History

Wilkinson, Otto Francis
 M. A., Ohio State University
 Williams, Frank Ernest
 M. A., University of Wisconsin
 Williams, Garvin Daniel
 B. S., University of Wisconsin
 Williamson, Robert Crosier
 B. A., University of Wisconsin
 Williamson, Robert Vernon
 B. S., Oregon Agricultural College
 Wilson, Alva
 M. A., University of Nebraska
 Wilson, Eugene Hewitt
 B. S., Alabama Polytechnic Institute
 Wolf, George Paul
 M. A., University of Wisconsin
 Wood, Frederick
 M. A., University of Wisconsin
 Wood, Waldo Emerson
 B. A., Central Normal College
 Woodworth, Clyde Melvin
 M. S., University of Wisconsin
 Young, Kwang Pi
 M. S., University of Wisconsin
 Young, Robert Vivian
 B. A., Ripon College
 Yount, Courtland Matson
 M. A., Northwestern University

Hilliard, Ohio
 Agricultural Economics
 Madison
 Geography
 Cambria
 Agricultural Chemistry
 Madison
 Physics
 Madison
 Chemistry
 Lincoln, Nehr.
 Experimental Breeding
 Oneonta, Ala.
 Animal Husbandry
 Menomonie
 Soils
 Madison
 Mathematics
 Michigantown, Ind.
 Education
 Madison
 Experimental Breeding
 Tientsin, China
 Chemistry
 Beaver Dam
 Political Economy
 Greenwood, Ind.
 Political Science
 —450

UNDERGRADUATES

COLLEGE OF LETTERS AND SCIENCE

Seniors

Adams, Adelaide Angela tc
 Adams, Marjorie Mae
 Adler, Philip Abrams
 Albers, Ruth Hermione
 Albright, Raymond William
 Alvord, Ellsworth Chapman l
 Andrews, Joy Ella t c
 Andrews, Stella Malitta tc
 Anson, Barry Joseph tc
 Antes, Herbert Pullen
 Appleman, George Mordecai
 Armen, George Krikor m
 Ashby, Mary Alice t c
 Ausman, Gladys Magdalena t c
 Axley, Harold m
 Aylward, Thomas James, Jr. m
 Bachhuber, Carl Alvin m
 Bacon, Frances Fairchild
 Baird, Austin Joseph
 Baker, Elizabeth
 Baker, Verena Marcella
 Baldwin, George Smith
 Barker, Howard Frederick
 Barker, Robert Isaac t c
 Barr, Helen Adeline
 Barwig, Adele Eliza
 Battig, Leon
 Baumann, Adolph Otto W.
 Beach, Florence Mildred
 Becker, George William
 Bell, Donald Chesbro m
 Bennett, Genevieve t c
 Bent, Winifred t c
 Benton, Joseph Levi m
 Berg, Max John
 Berger, Carl Herman
 Bergum, Belle Regina t c
 Bird, Marie Eaton
 Bitterman, Ruth Genevieve t c

Madison
 Chicago, Ill.
 New York, N. Y.
 Wausau
 Milwaukee
 Washburn
 Portage
 Madison
 Muscatine, Iowa
 Des Moines, Iowa
 Viroqua
 Racine
 Indianapolis, Ind.
 Eau Claire
 Cleveland
 Green Bay
 Mayville
 Madison
 Waukesha
 Evansville
 Fond du Lac
 Youngstown, O.
 Menomonie
 Boscobel
 River Forest, Ill.
 Mayville
 Milwaukee
 Kiel
 La Crosse
 Kenosha
 St. Joseph, Mo.
 Lancaster
 Oshkosh
 Richland Center
 Waupun
 Milwaukee
 Madison
 Wausau
 Madison

Black, Guy Woodrow	<i>Ft. Atkinson</i>
Bleckwenn, William Jefferson m	<i>Mendota</i>
Bloor, Edwin Garfield m	<i>Nashotah</i>
Boelte, Leda Henrietta t c	<i>Columbus</i>
Boll, Helen Flanders t c	<i>Rice Lake</i>
Bond, Edith Lorraine t c	<i>Madison</i>
Bond, Harry William m	<i>Wheeling, W. Va.</i>
Brabant, Josephine Mary t c	<i>Madison</i>
Bradish, Norman Conyers	<i>Decorah, Ia.</i>
Brand, Warner Holmes	<i>Madison</i>
Brewer, Fred French	<i>Menomonie</i>
Briggs, Henry Russell	<i>Madison</i>
Briggs, Howard Bovee	<i>Arena</i>
Brookins, Medora Clarke	<i>Madison</i>
Brooks, Dudley Cookingham t c	<i>Madison</i>
Brown, Lela Calhoun t c	<i>Hailey, Idaho</i>
Brown, Milo Sedgwick	<i>Hartland</i>
Bruns, Dorothy Mary	<i>Lake Mills</i>
Bryan, Walter Reid	<i>Madison</i>
Bullis, Harry Amos	<i>Madison</i>
Bunn, Bertha Kellett	<i>Spokane, Wash.</i>
Burke, Mead	<i>Chicago, Ill.</i>
Burke, Ruth Alice May t c	<i>Fort Smith, Ark.</i>
Burns, Robert Emmett m	<i>Madison</i>
Burtner, Emma Florence	<i>Germanatown, Ohio</i>
Burton, Alfred Harrison	<i>Chicago, Ill.</i>
Burwell, Marjorie	<i>Madison</i>
Calvert, Jacob Grafins, Jr.	<i>Jersey Shore, Pa.</i>
Caradine, Mahlon Humphrey l t c	<i>Monroe</i>
Cargill, George MacMillan	<i>Madison</i>
Carlson, Charles Gordon	<i>Ishpeming, Mich.</i>
Carlton, Marjorie Frances w l s	<i>Laurium, Mich.</i>
Carrell, Ross Marmon	<i>Des Moines, Iowa</i>
Carter, Eleanor Allen t c	<i>Louisville, Ky.</i>
Cazier, Lucile	<i>Chicago, Ill.</i>
Chapman, Margaret Frances t c	<i>Milwaukee</i>
Chase, Melvin Leslie	<i>Ashlon, S. Dak.</i>
Chase, Ruth Wayland	<i>Madison</i>
Cheu, Bailey L.	<i>Shanghai, China</i>
Clark, John Lindsay t c	<i>Steubenville, O.</i>
Clark, Lois Jean	<i>Boise, Idaho</i>
Conover, Julian Darst	<i>Madison</i>
Conover, Marion Clarke	<i>Madison</i>
Cook, Irene Croxton	<i>Bluffton, Ind.</i>
Coughlin, Mary Gertrude t c	<i>Watertown</i>
Cramer, Clarence Everett	<i>Madison</i>
Crane, William Hanlon	<i>Chicago, Ill.</i>
Cremer, Marcia Baird t c	<i>Cashton</i>
Cummings, Raymond Henry t c	<i>Madison</i>
Dahl, Charles Henry	<i>Marinette</i>
Davis, Marguerite Vivian t c	<i>Williams Bay</i>
Dawson, Dorothy Ware t c	<i>Waverly, Iowa</i>
Day, Florence Evelyn t c	<i>Lake Geneva</i>

Day, Florence Hodson t c
 Dickens, Evelyn Forster
 Dietel, Else Harriet
 Dillman, Mary Cecelia t c
 Dobie, Jessie Murray t c
 Donaldson, Emily Lucile
 Duffy, Gladys Marguerite t c
 Dunton, Mary Olive
 Dupuy, Mary Elizabeth
 Durrie, Agnes
 Duvall, Gladys Carolyn t c
 Eastman, Mary Eleanor
 Ebbert, Georgia Grosvenor
 Eddy, Elizabeth McKee
 Edwards, Eugene Theodore
 Egan, Ellen Winifred t c
 Egstad, Herman Melvin
 Ellis, Mabel Evangeline t c
 Emery, Myra Teel t c
 Ernst, Otto Theodore
 Esson, Victor Emmanuel
 Evans, James Ambrose m
 Farrand, Jack Easton
 Fay, Margaret Virginia
 Feeney, Jerome Joseph
 Feinberg, Samuel Maurice m
 Felsher, Hannah m
 Felten, Hilbert Oscar t c
 Fenelon, Eunice Sarah t c
 Fennessey, Katherine Christine t c
 Fields, Leah
 Fischer, Frederick Roy m t c
 Fisher, Grace Genevieve
 Forschler, Viola May
 Foulkes, Thomas Robert
 Fowler, Esther Lucile t c
 Fox, Osmon Charles t c
 Frazier, Cecil Austin t c
 Freer, Norman Bradford
 Fricke, Zura Marion t c
 Fuller, Vivian Marguerite
 Gage, Berta Marie
 Garber, Frank Webster
 Gardner, Dorothy Genevieve
 Garibaldi, John George Jr.
 Gath, Helen Dorothy
 Gault, Elizabeth Collins t c
 Gavin, Arthur t c
 Gerrits, Irma Dorothy t c
 Gevers, Carl Montague t c
 Gibson, Charles Archie m
 Gill, Charles Albert
 Gillogley, Laurel Elaine t c

Hartford
Milwaukee
Waterloo, Iowa
Randolph
Superior
Racine
Fond du Lac
Sycamore, Ill.
Chicago, Ill.
Madison
Kewaunee, Ill.
South Bend, Ind.
Oak Park, Ill.
Hot Springs, Ark.
La Crosse
Shullsburg
La Crosse
Madison
Madison
Watertown
Oconto
La Crosse
Fargo, N. Dak.
Madison
Madison
Watertown
Madison
Milwaukee
Weyauwega
Eau Claire
Hosston, La.
Lancaster
Baraboo
La Crosse
North Freedom
Fithian, Ill.
Madison
Prescott
Hinsdale, Ill.
Neillsville
La Crosse
Pasadena, Cal.
Muskegon, Mich.
Platteville
Chicago, Ill.
Madison
Portage
Ashland
Cedarburg
Madison
Madison
Madison
Mt. Carroll, Ill.

Gilpin, Margaret w l s
 Glassner, Esther Miriam t c
 Gleerup, Virginia Loring t c
 Gould, Dorothy
 Greene, Marjorie t c
 Griswold, Katharine Parker t c
 Griswold, Mabel Elizabeth
 Gundersen, Gunnar m
 Gundersen, Sigurd Bjarne m
 Gurney, Carrie Louise t c
 Gurney, Ellen Anna t c
 Habhegger, Elmer Otto
 Hagopian, Bedros
 Hahn, Emanuel Leopold
 Haley, Lillian Claire
 Hall, Earl Hopkins m
 Hall, Sophia
 Hambleton, James Isaac
 Hamilton, Florence Irene
 Hannon, Leo John m
 Hansberry, James Harry
 Hansen, Erik l
 Harloff, Rose Alice
 Hart, Dorothy
 Hatch, Ethel Sumner
 Hawkins, Eskil Theodore
 Hayden, Margaret Camilla
 Hayes, Arthur Michael
 Hayward, Laura Mae
 Hazelberg, Esther Vivian
 Heimerl, William Arthur t c
 Heise, Anna Sophia t c
 Heiskell, Mary Loretto
 Helmes, Lloyd Oscar m
 Henkel, Almira Lisetta t c
 Henry, Mary Ette t c
 Herrington, Edna Truax t c
 Heublein, Clarence Martin
 Higson, Francis Delmar
 Hodges, Fred Jenner m
 Holley, Mary Loraine t c
 Holmes, Marion Anna
 Hopkins, Edward James
 Huang, Feng-hua
 Huber, Kate D.
 Hudson, Louise Dorothy t c
 Hudson, Mary Harlow t c
 Hughes, Fred Parker
 Hull, Helen Claire t c
 Hull, Juliette De Veau
 Hunt, Margaret Lula
 Hyslop, Robert James m
 Isenberg, Estelle Helena t c

Duluth, Minn.
 Milwaukee
 Madison
 Evanston, Ill.
 Prophetstown, Ill.
 West Salem
 Madison
 La Crosse
 La Crosse
 Madison
 Madison
 Milwaukee
 Troy, N. Y.
 St. Louis, Mo.
 Madison
 Oconto
 Oshkosh
 Galloway, Ohio
 Tomah
 Sturgeon Bay
 Waukegan
 Milwaukee
 Madison
 Madison
 Tacoma, Wash.
 Cumberland
 Madison
 La Crosse
 Madison
 Barron
 Madison
 Madison
 Memphis, Tenn.
 Madison
 Milwaukee
 Reedsburg
 Madison
 Fox Lake
 Madison
 Madison
 Antigo
 Madison
 Madison
 Canton, China
 Madison
 Charleston, Ill.
 Madison
 Shelbyville, Ind.
 Madison
 Madison
 Madison
 Madison
 Baraboo

Jackson, Genevieve
 Jacobsen, Alta Theodora
 Jacobsen, Esther Helena t c
 Jansky, Cyril Moreau
 Jeddeloh, Henry Johann zu t c
 Jenison, Marguerite Edith t c
 Jenkins, George Harry
 *Jennings, Irene Hawley t c
 Jenny, Adele Theodora t c
 Jensen, Esther Andrea t c
 Jillson, Mary Louise t c
 Johnson, Gertrude Kildehl
 Johnson, Ralph Burbank
 Johnston, Charles Frederic, Jr. l
 Johnston, Edna Frances
 Jones, Emery Morris
 Jones, Helen Agnes
 Jost, Della t c
 Joy, Josephine Tremont
 Kaufman, Pearl Lillian
 Keeley, Margaret Mercedes t c
 Kehl, Sylvester Carl m
 Kemmer, Frank Leonard t c
 Kentzler, Ruth Purdy t c
 Kiley, William Earl m
 Kittleson, Eva Sylvia t c
 Klontz, Vernon Earl t c
 Knauer, Sophia Adeline m
 Knowlton, Margaret Roper
 Koehler, Lilly Minnie t c
 Koepp, William Paul t c
 Krasselt, Otto Louis t c
 Kuney, Bernice Donnelly
 Laemle, Leah Florence t c
 Lake, Thomas Owens m
 Lambert, Wilbur
 Lange, Eleanor Anna t c
 Langer, Harold Myron l
 Langer, Helen Mary
 Langhoff, Carl Joseph
 Laue, Charlotte Margaret t c
 Law, Edward John
 Leary, Julia Lenore t c
 Leven, Maurice
 Levis, George Winden
 Lewis, Florence Elizabeth t c
 Lewis, Raymond
 Liang, Chuan Ling
 Lind, Alberta Augusta w l s
 Livingston, Edward Meakin m
 Loughlin, Agnes Celestine t c

Aberdeen, S. Dak.
Oshkosh
Madison
Madison
Milwaukee
Fond du Lac
Oak Park, Ill.
Grand Rapids, Mich.
Milwaukee
Racine
Ripon
Madison
Roswell, N. Mex.
Sheffield, Iowa
Rudolph, Ohio
Madison
Ravinia, Ill.
La Crosse
Akron, Ohio
Ladysmith
Mayville
Madison
Madison
Madison
Byron, Ill.
Elroy
Madison
Brooklyn, N. Y.
Madison
Menomonee Falls
Madison
Milwaukee
Three Lakes
Marshfield
Oshkosh
Memphis, Tenn.
Cedarburg
Waterloo
Chicago, Ill.
Milwaukee
Alma
Madison
Madison
Fond du Lac
Madison
Madison
Macfarland
Shantung, China
Madison
Madison
Madison

Lounsbury, Helen Irene
 Luebben, Gerold Edward
 Luebchow, Erwin Otto t c
 Lynden, Eleanor Ruth t c
 McCann, Ray Thomas t c
 McCarthy, Blanche Marie t c
 McCarthy, Elizabeth Lucile t c
 McCoy, Leslie Layton m
 McCroy, Raymond John t c
 McGuire, Margaret Agatha
 McHenry, Ada Dorothy t c
 McKay, Betsey
 McKay, Frederick William
 McKennan, Rachel
 McKennan, Ruth t c
 McMillan, Carol t c
 McNamara, Hazel Johanna
 McRoberts, John Harold
 Macgregor, Elizabeth Cruikshank
 Mackedon, Leo William m
 Maedje, Carl Waldemar
 March, James Herbert
 Marsh, Harry Gilmore m
 Martin, Hazel Isabelle t c
 Mathews, Isabelle Bertram t c
 Merrill, John Franklin
 Middleton, Forest Case t c
 Mielenz, Irving Albert t c
 Miller, Helen Rachel t c
 Miller, George Ellsworth, Jr.
 Miller, Glen Henry m
 Miller, Myrtle
 Miller, Sidney Fred
 Milner, Myrtle Olive
 Miner, Harry Eugene
 Moehlman, Lillian Susan w l s t c
 Moll, Arthur Mackenzie m
 Mooney, Marian Louise t c
 Morris, Edith Irene
 Morsell, Mary Pendleton t c
 Morton, Charles Delos
 Moser, Clara Pauline
 Müller, Herbert Arthur t c
 Mallowney, Nora
 Murray, Katherine Margaret
 Mygrant, Ethel Marie
 Naffz, Ena Gertrude
 Naylor, Vera Emma t c
 Nelson, Byron Christopher
 Nelson, Theodora Chase t c
 Nelson, Wilford Merriam m
 Newman, Irene Mary t c
 Newman, John Logan l

Madison
 Milwaukee
 Wausau
 Hayward
 Edgerton
 Madison
 Milwaukee
 Pittsville
 Milwaukee
 Superior
 Milwaukee
 Philadelphia, Pa.
 Oshkosh
 Madison
 Madison
 New York, N. Y.
 Prophetstown, Ill.
 Aledo, Ill.
 Memphis, Tenn.
 Milwaukee
 E. Cleveland, Ohio
 Warren, Ohio
 Waunakee
 Madison
 Ashland
 Neshanic Station, N. J.
 Madison
 Milwaukee
 Lake Geneva
 Charleston, W. Va.
 Omaha, Nebr.
 West Salem
 Helena, Mont.
 Charles City, Iowa
 Milwaukee
 Madison
 Kenton, Mich.
 Superior
 Oshkosh
 Milwaukee
 Chicago, Ill.
 Elgin, Ill.
 Reedsburg
 Milwaukee
 Estherville, Iowa
 Madison
 Madison
 Tomah
 Madison
 Madison
 Madison
 Madison
 Milwaukee

Nicely, Ruth Sarah t c	<i>South Bend, Ind.</i>
Nichols, Clio Johnston	<i>Gallipolis, Ohio</i>
Nix, Else Margaret t c	<i>Indianapolis, Ind.</i>
Nixon, Earl Kaiser	<i>Severy, Kas.</i>
Nolan, Edward Paul	<i>Ishpeming, Mich.</i>
Noll, Inez Margaret t c	<i>Marshfield</i>
O'Connor, Clarence Wood	<i>Milwaukee</i>
Olson, Henry John m	<i>Beloit</i>
O'Neil, Catherine Eleanor t c	<i>Chippewa Falls</i>
O'Neill, Norma Millicent t c	<i>Chicago, Ill.</i>
Orton, Claribel Elizabeth t c	<i>Marietta, Minn.</i>
Oskamp, Alfred Stuart t c	<i>Wyoming, Ohio</i>
Palmer, Gladys Evelyn	<i>Oak Park, Ill.</i>
Pancoast, William Wiles	<i>Eaton, Ind.</i>
Parker, Edna Amelia	<i>Eaton, Ohio</i>
Parson, Leonard Bradt	<i>De Kalb, Ill.</i>
Patterson, Bertha Louise t c	<i>Madison</i>
Peebles, Grace Elizabeth t c	<i>Oconomowoc</i>
Penhalleton, Mary Genevieve t c	<i>Mineral Point</i>
Penningroth, Benjamin Gottlieb	<i>Tipton, Iowa</i>
Peters, Robert Leroy l	<i>Blue River</i>
Phillips, Harold Edward m	<i>Chicago, Ill.</i>
Pierce, Gladys Marie t c	<i>Brodhead</i>
Plumb, Mary Alma t c	<i>Fairview, Kans.</i>
Powell, Elias	<i>Madison</i>
Rainey, Edward Carlisle m	<i>Madison</i>
Ramsay, Eleanor t c	<i>Madison</i>
Ramsey, Madeline Eva	<i>Chicago, Ill.</i>
Reichert, John Lester m	<i>West Bend</i>
Reichert, Ramona t c	<i>West Bend</i>
Richardson, Chester Dee	<i>Madison</i>
Richdorf, Lawrence Francis m	<i>Maribel</i>
Rickett, Harold William	<i>Millbrook, N. Y.</i>
Rigast, Karl Adolph t c	<i>Milwaukee</i>
Rivers, Thomas Ellis	<i>Meridian, Miss.</i>
Roantree, Robert Peter m	<i>Parker, S. Dak.</i>
Roberts, Florence Jean	<i>Superior</i>
Roberts, Ruth Olive t c	<i>Madison</i>
Roberston, Ruth Elizabeth	<i>Indianapolis, Ind.</i>
Roder, Esther Carolyn t c	<i>Madison</i>
Rodgers, Clarence C. t c	<i>Madison</i>
Rodigan, Mary Virginia t c	<i>Racine</i>
Root, Margarette Josephine t c	<i>Peoria, Ill.</i>
Rosenblatt, Hymen	<i>Milwaukee</i>
Rubado, Clarence Arthur	<i>Platteville</i>
Runge, Elizabeth Agnes	<i>Milwaukee</i>
Ryan, Mark Edward m	<i>Oconomowoc</i>
Sachtjen, Sylvia Marie	<i>Madison</i>
Sachtjen, Wilbur Paul	<i>Madison</i>
Salsman, Thomas Jefferson, Jr.	<i>Oak Park, Ill.</i>
Sanders, Hazel Alvilda	<i>Madison</i>
Sarles, Frances Margaret	<i>Sparta</i>
Sawyer, Wilda Amy t c	<i>Menominee, Mich.</i>

Sayle, George William
 Schacke, Martha Alvina t c
 Schardt, Alfred Arlie t c
 Schmidt, Ernst Conrad
 Schrader, Ilse Josephine t c
 Schreiner, Margaret t c
 Schultz, George Howard t c
 Schweichler, Lothar Adolph l
 Seeger, Gladys
 Seibold, Fred Carl l
 Seids, James Vane m
 Shank, Carl Bradley
 Sheakley, Eleanor Mary t c
 Shearer, Harry Arthur m
 Sherman, Ivan Ashley t c
 Sievers, Edward George
 Skinner, Margaret Audrey
 Slichter, Louis Byrne
 Smith, Maxwell Austin
 Smith, Nina Kathleen t c
 Snaddon, Robert t c
 Sollie, Clara Georgine t c
 Spain, Helen Frances
 Spicer, Myrle Harrison t c
 Stallmann, Louise Helen t c
 Stark, Nina Caroline
 Starry, Leo Joseph m
 Stauffer, Margaret Guthrie
 Stitt, Lydia Isabel
 Sukeforth, Howard Arthur
 Sweetman, Verna Blanche
 Swerig, Vivian Pearl w l s
 Swingle, Ruth Mable t c
 Tabor, Beatrice Carroll t c
 Taylor, Paul Schuster l
 Taylor, Susan Shelby
 Te Linde, Richard Wesley m
 Thomas, Charles Signor, Jr.
 Thompson, Esther Katherine
 Thompson, Nora Julia
 Thornton, Helen t c
 Thwing, Consuelo Lay t c
 Tillman, Arthur George
 Tillotson, Ruth Amelia
 Tobey, Ruth Hull w l s
 Totten, Helen Ruth
 Trilling, Blanche Mathilde
 Truitt, John William m
 Tufteland, Marcus B.
 Tuller, Cass Carlene
 Tupper, Warren Ernest m
 Tye, William Leo
 Tyrrell, Gladys Dorothy

Madison
Reedsburg
Milwaukee
Chicago, Ill.
St. Paul, Minn.
Lancaster
Milwaukee
Milwaukee
Manitowoc
Camp Douglas
Moline, Ill.
Chicago, Ill.
Chicago, Ill.
Edgerton
Marshall
New Holstein
Brookings, S. Dak.
Madison
Madison
Beaver Dam
Madison
Ashland
Madison
Madison
Watertown
Zion City, Ill.
Madison
Appleton
Rudolph, Ohio
Duluth, Minn.
Indianapolis, Ind.
Madison
Muscoda
St. Ignatius, Mont.
Sioux City, Iowa
Madison
Waupun
Chicago, Ill.
Elmwood
Grand Rapids, Mich.
Indianapolis, Ind.
Toledo, Ohio
La Crosse
Madison
Wausau
Washington, Kans.
Madison
Naperville, Ill.
Pekin, N. Dak.
Morrison, Ill.
Cameron, Idaho
West Chicago, Ill.,
Madison

Vergeront, Marie Edna t c
 Waite, Jay Davies
 Wall, Lillian Marietta Gorman t c
 Waller, Theodore Adolph
 Wattawa, Esther Wilhelmine t c
 Wedel, Sylvia Carmen
 Weeks, Frank Amelia t c
 Weeks, Louis George
 Weiner, Morris m
 Weisse, Curtis Clay
 Welke, Ernest Gottlieb m
 Weller, Charles Grafton m
 Wells, Alberta May
 Wengler, Harold
 Werner, Walter Albert l
 Wessel, Iona Johene t c
 Westcott, May Kendall
 Westgate, Clyde James m
 Wheaton, Harriette Maude
 Wheeler, Sylvester Laurence l
 Whipple, Marthana
 Whitney, Katherine Townsend t c
 Wiehl, Dorothy Gerárd
 Wilcox, Lyle Brownell
 Wilde, Edwin m
 Willcox, Faith Elizabeth
 Williams, Virginia Baird
 Wilson, Allene
 Witthuhn, Elmer William t c
 Wood, Beatrix Lanore t c
 Wood, Irving William
 Wood, Meta Aileen t c
 Wood, Ralph Hereld
 Woodard, Allen Byrne
 Woodhouse, Norma t c
 Wooll, Gerald Kelley m
 Wright, Omar Burton
 Yabroff, Rose t c
 Youmans, Henry Augustus m
 Younker, Helen Hedwig t c
 Zeisig, Edward Frank t c
 Zellmer, Carl Edward m
 Zischke, Herman Albert l

Madison
Madison
Eau Claire
Madison
Madison
St. Louis, Mo.
Racine
Chilton
Milwaukee
La Crosse
Fall Creek
Fond du Lac
Denver, Colo.
Madison
Adams
Madison
Baltimore, Md.
Cadott
La Harpe, Ill.
Wauwatosa
Waterloo
Madison
St. Joseph, Mo.
Madison
Milwaukee
Mount Vernon, N. Y.
Madison
Cape Girardeau, Mo.
Appleton
Hancock
Oakland, Cal.
Fulton, Mo.
Hancock
Marengo, Ill.
Bloomington
Madison
Belvidere, Ill.
Fond du Lac
Mukwonago
Des Moines, Ia.
Milwaukee
Antigo
Ihoricon

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Course in Commerce

Barnum, Clifton Lawrence
 Bauman, John Sprague
 Beneke, Henry John
 Blumenfeld, Franklin David
 Boldt, Arnold John
 Bottum, Stewart Neil

Clinton
Oshkosh
Spokane, Wash.
Madison
Davenport, Iowa
Twin Bear, S. Dak.

Burmeister, Roy Frederick I
 Camp, Edwin Warren
 Childe, John Pollock
 Coughlin, Raymond Michael
 Davis, Oak Robert
 Denfeld, George August t c
 Dickson, Wilbur George
 Dixon, Donald Pendleton
 Docken, Clarence Oliver
 Donnelly, James Stuart
 Drowatzky, Bernard Harvey
 Eason, Graeme Sanford
 Fellman, Judson Le Roy
 Field, Harry William
 Findorff, Milton Bremer
 Friedberg, Joseph
 Fuller, George Milton
 Galbraith, Victor Arral
 Gardner, Milton Leroy
 Garrigan, George Arthur
 Golla, Gertrude Marie
 Good, Samuel Pulse
 Greunke, Emmery August
 Griem, Rolf
 Haessler, Gertrude Johanna
 Haessler, Helen Annette
 Hamilton, Bradford
 Harper, Benjamin Louis
 Helmer, John Horatio
 Hendricks, Wilbert Christian
 Heymann, Edgar Isaac
 Hoppert, Arno Henry
 Hughes, William Robert
 James, Raymond Hoerner
 Jennett, Edward James
 Jerabek, Joseph August
 Johnson, Albert Sigfred
 Jones, Silas Loyd
 Keeley, Clarence Armand I
 Kletzien, Adonis Theodore
 Kletzien, Loyal Herman
 Knorr, Arthur Herman
 Kuentz, Herbert Daniel
 Lange, Alex D.
 Laughlin, John Leo
 Lederer, Carl Singer
 Leonard, Lowell Austin
 Lester, William Pullman
 Lichtfeldt, Clarence Hellmuth
 McNulty, Mary Agatha
 Macfadden, William Semple
 Mahler, Herbert Phillip
 Mallow, Ray Shoults

Gratiot
Madison
Wyoming, Ohio
Baraboo
Milwaukee
Wausau
Two Rivers
La Crosse
Mt. Horeb
Appleton
Tomah
Spokane, Wash.
Milwaukee
Rice Lake
Madison
Milwaukee
Madison
Madison
Ashland
Beloit
Grand Rapids
Warren, Ind.
Appleton
New Holstein
Milwaukee
Milwaukee
Madison
Peshigo
Clinton
Tomah
Chicago, Ill.
Sheboygan
Milwaukee
Chicago, Ill.
Streator, Ill.
Algoma
Shell Lake
Warren, Ind.
Mayville
New Holstein
New Holstein
Kiel
Colby
Madison
Antigo
Chicago, Ill.
Riverside, Ill.
Kenilworth, Ill.
Milwaukee
Spring Green
Fargo, N. Dak.
Milwaukee
Madison

Mandel, Herbert William
 Marshall, Harry Lloyd, Jr.
 Millard, Paul Vilas
 Mills, Joseph Alderman
 Mitchell, John Lendrum I
 Monser, Edward Lomax
 Moon, Joe Nathan
 Nevin, William Ambrose
 Nichols, Wellington Clifford
 Niemand, Alfred Richard
 Olsen, Harold Goodwin
 Piehl, Gunard Alfred
 Prange, Elmer William
 Quail, John Joseph
 Reyer, Hugo
 Rimsnider, Harry Edgar
 Rom, Roy George
 Ross, William Ernest
 Routt, David
 Ruedebusch, Kurt Carl
 Russell, Samuel Wood
 Schaefer, Leo Henry t c
 Schubert, Arthur Frank
 Schweke, Phillip Reinhart
 Service, George Lorenze
 Shipek, Edward
 Simonson, Oscar Theodore
 Smith, Earle Eugene
 Smith, Russell Everts
 Steele, Clay Evans
 Taylor, Glenn Erwin
 Taylor, Russell Fayette
 Thomas, Charles Gerard
 Thomas, Foster Keith
 Tikalsky, Charles William
 Trebilcock, Arthur Francis
 Tree, Orville Le Roy
 Watson, Elmer Eugene
 Watzke, Louis August
 Wiles, George Marshall
 Williams, Myron Charles
 Withington, James Sterling
 Wolf, Clarence Nathan
 Young, William Monroe, Jr.
 Yu, Hsi Chi
 Zwickel, Ernest Maurice

La Grange, Ill.
Chicago, Ill.
Antigo
Nevada, Iowa
Milwaukee
Wenona, Ill.
Rosendale
Racine
Wausau
Davenport, Iowa
Rice Lake
Williams Bay
St. Louis, Mo.
Hayward
Colby
Madison
Milwaukee
Madison
Milwaukee
Mayville
Spokane, Wash.
Muscoda
La Crosse
Reedsburg
Mishawaka, Ind.
Antigo
Lanesboro, Minn.
Oshkosh
Madison
Belmont
Ashland
Whitewater
Kenosha
Madison
Madison
Mineral Point
South Wayne
Madison
Madison
Madison
Madison
Baraboo
Sun Prairie
Milwaukee
Shanghai, China
Anderson, Ind.

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Course for Normal School Graduates

Allison, Alma t c
 Ames, Walter Ray
 Anderton, Ethel Vinita t c
 Boss, Bernard Lewis t c

Carthage, Mo.
Madison
Prairie du Chien
Abbotsford

Damuth, Lenora Rosane t c
 Donalds, Elliott Raphael
 Donaldson, Nellie King
 Fuller, Florence Dell t c
 Gebhard, Cornelia Marie
 Gray, Richard
 Hodge, Edith Evelyn
 Jones, Jessie E. t c
 Ketcham, Hazel Mae
 Krueger, Walter William t c
 Mueller, Frederick George t c
 Naidl, George Mathew t c
 Paulson, Walter Ernest
 Peterson, Alvin Martin t c
 Prochaska, Joseph Frank t c
 Resmeyer, Emma Bertha
 Schraa, Nicholas Charles
 Torgerson, Theodore
 Van Beek, Clara
 Warner, Nellie
 Whipp, Anna Mabel
 Wiener, Joseph Baxter
 Wilson, William Balfour

Ft. Atkinson
Superior
Racine
Madison
West Allis
Milwaukee
Waunakee
Madison
Grand Rapids, Mich.
Milwaukee
Madison
Whitelaw
Hollandale
Wausau
Monfort
Madison
Antigo
Ontario
Aberdeen, S. Dak.
Madison
River Falls
Superior
Belleville

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Course in Chemistry

Barber, George Edgerly
 Biersach, Henry Louis
 Chaplin, Edgar Lee
 Etter, Rolland Robert
 Fleck, Louis Carl
 Graper, Leslie Gilbert
 Gregg, Wells Kellogg
 Hardy, James Edward, Jr.
 Hosman, David Fay
 Huebner, Erwin Otto
 Jacob, Harold Monroe
 Krohn, Carl Arthur
 Phillips, Max
 Renich, Florence Caroline
 Richardson, Marston Samuel
 Rude, Theodore Alfred
 Schunk, Oliver Henry
 Scott, Earl William
 Smith, William Lester
 Sproesser, William Charles
 Stericker, William
 Suhr, Lewis Delmar
 Vance, Sarah Huntoon
 Zick, William John

Onalaska
Freeport, Ill.
Plymouth
Monroe
Depere
Ft. Atkinson
Milwaukee
Louisville, Ky.
Norfolk, Nebr.
Oconomowoc
La Crosse
Marinette
Evansville
Woodstock, Ill.
Madison
Washburn
Menomonee Falls
Cambridge
La Crosse
Milwaukee
Manitowoc
Madison
Louisville, Ky.
Sauk City

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Course in Journalism

Ayer, Esther Newell	<i>La Grange, Ill.</i>	
Blied, Leo John	<i>Madison</i>	
Buehler, Edmund	<i>Alma</i>	
Ellman, Florence Jeanette	<i>Madison</i>	
Getzloe, Lester Clyde	<i>Milwaukee</i>	
Judell, Maxson Foxhall	<i>Milwaukee</i>	
Kailen, Florence	<i>Madison</i>	
Moore, Willard Frank, Jr.	<i>Madison</i>	
Radder, Norman John	<i>Sheboygan Falls</i>	
Strong, Edwin Joseph	<i>Milwaukee</i>	—10

General Course

Clark, James George, Jr.	<i>Oshkosh</i>	
Karch, Charles Henry	<i>Blue Island, Ill.</i>	—2

Juniors

Abe, Arata	<i>Fukuoka, Japan</i>
Adair, George Leonard	<i>La Crosse</i>
Adams, Hope	<i>Madison</i>
Adams, Mae Alice	<i>Racine</i>
Alling, Eliza Treat	<i>Tallmadge, Ohio</i>
Andrews, Elizabeth Ona t c	<i>Darlington</i>
Andrews, Lulu Belle t c	<i>Madison</i>
Anundsen, Miss George Brynnilde	<i>Monroe</i>
Atwood, Fredrica	<i>Madison</i>
Babcock, Eleanor Bernice t c	<i>Berlin</i>
Baerenwald, Charles	<i>Milwaukee</i>
Bagley, John Earl	<i>Madison</i>
Bahe, Kenneth Edward	<i>Chicago, Ill.</i>
Ballard, Abbie Erminie	<i>Milwaukee</i>
Barber, Louise Medberry	<i>Oshkosh</i>
Barger, Robert Lynne	<i>Chicago, Ill.</i>
Batty, Helen Margaret t c	<i>Madison</i>
Beach, Richard White l	<i>Newcastle, Ind.</i>
Beckwith, David Van Waller	<i>Berlin</i>
Beech, Ruth Spalding	<i>Adams</i>
Bell, Dorothy Marion	<i>Willoughby, O.</i>
Belowsky, Harry S.	<i>Milwaukee</i>
Benson, Ada Lillian	<i>Princeton, Ill.</i>
Benson, Robert Henry	<i>Milwaukee</i>
Bentley, Faye Oretta t c	<i>Madison</i>
Berg, Lucile Harriet	<i>Ruthven, Ia.</i>
Berger, Walter Jesse	<i>Sheboygan</i>
Bestow, Leita Ruth t c	<i>Sparta</i>
Beyer, Ruth Laura t c	<i>Baraboo</i>
Blachly, Louis Bradley	<i>Madison</i>
Blackmun, Jay W. t c	<i>Twin Valley, Minn.</i>
Blair, John Covode	<i>Grand Rapids, Mich.</i>

Blanchard, Elizabeth Anne Rowell
 Blau, Clara Marie t c
 Bliss, Madalin
 Blix, Ovid Bernhart
 Blum, Fred Gabriel
 Boardman, Newell Stephen
 Bollman, Mari Henri
 Bondi, Hobart Edward
 Bongey, Ralph Hutchinson t c
 Bosworth, Leslie Jennings
 Bowersox, Helene Jarvis t c
 Boyce, Ruth Huldah
 Boynton, Ruth Evelyn m
 Bramlette, Ruth
 Braun, Edward John t c
 Brennan, Joseph Patrick m
 Brewer, Robert Miller
 Brinker, Dorothy Lillian
 Brittingham, Edward George
 Brorby, Melvin LeRoy
 Brossard, Eugene Edward
 Brown, Alois Anthony
 Brown, Christine Etna
 Brown, Dorothy Grace
 Brown, Mary Elizabeth
 Brown, Neil Winthrop
 Bryden, James Alan
 Bryhan, Leone Grace t c
 Buchanan, Perry Baker
 Buckstaff, Elsie Daniel
 Buell, Bessie Margaret t c
 Buell, Helen de Yoe
 Bull, Helen Perkins
 Bundy, Katherine Mary
 Bunker, Ruby Mae
 Burlingame, LeRoy James
 Burtness, Katherine Elvina t c
 Calkins, Marian Clinch
 Cantwell, Roger Clifton m
 Carpenter, Dow W.
 Casey, Marcus Thomas
 Casey, Matthew Joseph
 Chadwick, Rachel Beal
 Chamberlain, Margaret
 Cheyney, Edward Ralph
 Childs, Marshall Howard
 Christianity, Carter Cornelius
 Clancy, Marion Leslie
 Clark, Jessie Overton
 Clark, Robert Hawley
 Clarke, Josephine Freeman
 Clarke, Vera Margaret t c
 Clow, Lucia Baldwin t c

Oshkosh
Spring Green
Chicago, Ill.
Turtle Lake
Monticello
New Richmond
St. Louis, Mo.
Madison
Deerfield
Manley, Iowa
Bryan, Ohio
Oconto Falls
La Crosse
Madison
Cassville
Butte, Mont.
Indianapolis, Ind.
Niagara Falls, N. Y.
Los Angeles, Cal.
Chicago, Ill.
Columbus
La Crosse
Urbano, O.
Chicago, Ill.
Chicago, Ill.
St. Louis, Mo.
Milwaukee
Lancaster
Winnetka, Ill.
Oshkosh
Delavan
Madison
Oak Park, Ill.
Eau Claire
Montfort
Madison
Sioux City, Iowa
Evansville
Shawano
Des Moines, Ia.
New Richmond
Oconomowoc
Detroit, Mich.
Milwaukee
Philadelphia, Pa.
Eau Claire
Warren, Ohio
Winnetka, Ill.
Schoolcraft, Mich.
Grand Rapids, Mich.
Marietta, Ga.
Madison
Oshkosh

Coapman, Maude L.
 Cole, Marion Olive
 Collins, Esther Agnes
 Collins, Helen Jeanette t c
 Colosimo, Sarah Lois t c
 Colvin, Jessica Burt
 Commons, John Alvin
 Compton, Donald Elliot
 Conley, Crede Haymond
 Coon, Harold Macomber m
 Corstvet, Emma Gretchen
 Corwin, Winnafred Katherine
 Cox, Elizabeth Jean
 Craig, Helen t c
 Craneheld, Marion Charles t c
 Crosby, Rosamond t c
 Culver, Catherine
 Cunningham, Louis
 Currie, Paul Monser
 Curtis, Kenneth
 Curtis, Willard Lincoln
 Dahl, Edwin John
 Damkoehler, Emma Clara t c
 Davis, Beulah t c
 Davis, Dudley Hopkins
 Davis, Marion Evelyn
 Davis, Trayton Hooker
 Dawson, Helen Beryl
 Dawson, Marion Lucile
 Day, David Eliot
 Deming, Joseph Byron
 Dennis, Clayton Stanley
 Dick, Mary Catherine t c
 Diebold, Carrie Elise
 Diederich, Otto Peter m
 Dodd, Helen Rose
 Dodd, Joseph Conway, Jr.
 Dodge, Newell Phelps t c
 Doran, Blanche Marie
 Dormeyer, William George
 Driver, Camilles Ogden m
 Dudley, Grace Elizabeth
 Duke, Helen Masner
 Dummer, Ethel Sturges
 Dunn, Florence Jane
 Dunnette, Marian
 Durst, Willis Henry
 Eaton, Helen Orrissa t c
 Eaton, Howard Ormsby
 Ebersole, Ruth
 Ede, Richard Hoyt
 Edwards, Everett Carlyle
 Edwards, William Donaldson

Kilbourn
 Chicago, Ill.
 Fond du Lac
 Stevens Point
 Hurley
 Evanston, Ill.
 Madison
 Tomah
 Clarksburg, W. Va.
 Stevens Point
 Milwaukee
 Des Moines, Iowa
 Madison
 Jacksonville, Ill.
 Madison
 Grand Rapids, Mich.
 Milwaukee
 La Crosse
 Minneapolis, Minn.
 Chicago, Ill.
 Chicago, Ill.
 La Crosse
 Milwaukee
 Tamms, Ill.
 Madison
 Sioux City, Iowa
 Waupun
 Chicago, Ill.
 La Crosse
 Washington, D. C.
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 Grand Rapids, Mich.
 Marshfield
 Milwaukee
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 Ashland
 Louisville, Ky.
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 Harvard, Ill.
 Chicago, Ill.
 Racine
 Cincinnati, Ohio
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 Alpiné, Mich.
 Monroe
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 Monmouth, Ill.
 Lyons
 Ashland
 Leipsic, Ohio

Egan, Howard Edward t c
 Elder, Edwin Sharretts
 Ellaworth, Thomas Thorpe
 Ely, Anna Mason
 Ely, John Thomas Anderson
 Endres, Otto John
 Erickson, Gertrude Winifred
 Erlandson, Ray Sanford
 Ernst, Hilmar Furst
 Espeland, Arthur
 Etnyre, Marjory
 Etteldorf, Marie Rosine
 Evans, Jessie Marion t c
 Evans, Margaret Mae t c
 Everett, Lucile
 Eversoll, Norton John m
 Ewald, Louis Philip
 Ewing, Charles Oscar
 Farquhar, Charles
 Fauerbach, Clara Vierling
 Fauerbach, Louis, Jr. m
 Fay, Ivan Glen
 Feldmann, Louis Charles t c
 Felsher, Rosa t c
 Ferguson, Mary Josephine
 Fischer, Warren Charles
 Fitzgerald, Gertrude
 FitzGibbon, Bernice Bridget t c
 Fleming, Marion Edith t c
 Fleming, Mary Florence t c
 Flood, Olaf
 Forbes, Esther Louise
 Forrand, James Leland
 Foth, Annette Ernestine t c
 Fox, Marion Adelaide
 Fox, Stephen Patrick
 Francis, Hugh Huntington t c
 Fraser, Margaret Alice
 Frisbie, Chauncey Osborn, Jr.
 Fruin, Elizabeth
 Fullerton, Dorothy Jane
 Gardiner, Glenn Leon
 Gates, John Ferdinand G. m
 Geiger, Kathryn Marie t c
 Germer, Gertrude Emily
 Gether, Berenice Katherine
 Gidley, Annie Bertha
 Gilbreath, William Sydnor, Jr.
 Gilman, James Ward
 Gilman, Robert Louis m
 Glover, Mary Staunton t c
 Goodland, Doris Martha t c
 Goodwin, Harriet

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 Graner, Richard Fischer
 Grant, James Evert
 Green, Jessie Louise
 Griesser, Marjorie Katherine
 Grill, Karl Rudolf Natanael t c
 Grosser, Reynolds Clarence
 Grueneisen, Jesse Raymond
 Guild, Eugene Schiller
 Guillemine, Madeleine
 Guttman, Lyd Paul m
 Halbert, Howard Valmore
 Halik, Glen William t c
 Halsor, Anna Semelie t c
 Halverson, Alma Newell
 Halverson, Estella Ione
 Hammon, Louise
 Hanley, Mary Lois t c
 Hanson, Alma Christine
 Hanson, Elma May
 Hanson, Will Peter
 Hardman, Jaunita Marie t c
 Hartman, Leone Anne
 Hartmann, Edna Gertrude t c
 Hayes, Charles Addison
 Heckman, Ray Mathias
 Hefty, Paul Leo m
 Helmes, Dorothy Alma
 Henderson, George von Bunsen
 Hendrickson, Clarence w
 Henry, Albert James
 Heseman, Harold Carl
 Hessman, Amanda C. t c
 Higgins, Catherine Romana t c
 Hill, Frances Lucretia
 Hoefler, Merrill Clayton
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 Holahan, Gretta Felon
 Holstein, Gladys Mae
 Hopson, Perle Mary
 Horn, Ada Olga t c
 Hoskins, Letha Marjorie
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 Houck, Knut Koegh m
 Hovrud, Nora Christine t c
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 Irwin, George Howard m

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Irwin, Macaulay
 Jacobson, Roland Arthur m
 Jamieson, Frances Marguerite t c
 Jankel, Clara Augusta t c
 Janney, Francis Rush m
 Jenkins, Esther t c
 Johannesen, Rolf Thorleif Horn t c
 Johnson, Charles Wallace
 Johnson, Genevieve Catherine t c
 Johnson, Gladys
 Johnson, Harvey Chester
 Johnson, Julia Agnes
 Jones, Irene Helen t c
 Jones, Mildred Elizabeth t c
 Julio, Laura
 Kammerer, Helen Theresa t c
 Kasiska, William Herman
 Kasten, Harry Edward m
 Kellogg, Elenore Virginia
 Kemp, Earl Parker
 Kennedy, Dorothy Elizabeth
 Kepke, Clara Louisa Fredericka
 Kesler, Edna Marie
 Ketcham, Iva Nodene
 Kevin, Paul Robert m
 Keyes, Francis Orton
 Khanlian, Parsyl Benjamin m
 Kimball, Emily Amanthus
 King, Alice Van Patten
 Kinnan, Marjorie
 Kinne, Harold Everett l
 Kinsman, Francis Cyrenus m
 Kleinheinz, Theresa Marie t c
 Klenk, Ione Magdalena
 Kluth, Amanda Augusta
 Knowler, Eve Tenney
 Knowlton, Helen Sheldon
 Kobetich, Mary Rose
 Koelsch, William Alfred m
 Kohlhoff, Carl Henry t c
 Kraatz, Walter Charles t c
 Krause, Rosa Laura
 Kreitzer, Augusta Mathilde t c
 Kremers, Elsa
 Krieger, Florence Isabel
 Kriz, Rose Alice m
 Lackey, Esther Hutchins
 La Due, Russell Morseyby
 Lakoff, Charles B. m
 Lander, Miles Krause
 Lange, Ivan Louis
 Langjahr, Arno Robert m
 Lathrop, Amy Cecelia t c
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 Cedarburg
 Plymouth
 Bridgeport

Lathrop, Francis Child
 Laut, Margaret Dorilla t c
 Lerch, Mary Fredrica
 Lingle, Paula Elizabeth Nancy
 Littig, Esther Eugene t c
 Logan, Lucile Harshaw
 Longfield, Charles Samuel
 Loomis, Dorothy
 Loomis, John Lawrence m
 Loverud, Alvin Matthew l
 Loy, Georgia Adeline
 Luessen, Alma Catherine t c
 MacArthur, Arthur Stanley
 MacDonald, Robert Paul
 McCarthy, Margaret Mary
 McColl, William Fraser m
 McIntosh, Charles Thomas
 McKinley, George Button
 McKnight, Emma Marie t c
 McMurray, Marjorie
 Mabis, Katherine Virginia
 Mackenzie, James Norman
 Madden, Marguerite Helen
 Marquart, Martha Luella
 Martin, Edith Margaret
 Martin, Kate Landis
 Mattuschek, Ervin Edward
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 Metachi, John
 Meyer, Charles Alois
 Meyer, Harrison A. t c
 Middlekauff, Margaret Lucy
 Miller, Audra Evelyn
 Miller, David Beckwith
 Miller, Florence Emma t c
 Miller, John Coventry
 Mills, James Stewart m
 Milton, Margaret Kirtley
 Moeschler, Clara Margaret
 Mooney, Alice Elizabeth
 Morris, Kathryn
 Morris, Meade McKinley
 Morse, Edwin French
 Morter, Jennie Luella
 Moses, Milton
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 Mullen, Bernard Parker m
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 Murphy, Lorna
 Muskat, Irving Isidor m
 Nash, John William t c
 Nehrlich, Margaret Regina

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Nelson, Ingrid Chase
 Nelson, Lutie Marie
 Neprud, Marion Catherine
 Nicolls, Evelyn Virginia t c
 North, Elizabeth Anne
 O'Brien, Marie Eileen t c
 Odèn, Constantin Luther Ambrosius m
 Oliver, George Peter
 Olsen, Lucille Eleanor
 Oppen, Clara Louise t c
 Partridge, Florence Alevia.
 Pearsall, Barbara Evelyn
 Pearson, Norma Lenys t c
 Pergande, Loretta Mathilda
 Peterman, Mynie Gustav m
 Petersen, Arthur S. J. m
 Peterson, Esther Adollia t c
 Peterson, James Dahle l
 Pierce, Cordelia Clement t c
 Pink, John James m
 Pohle, Viola Elizabeth t c
 Porter, Adelaide Grace t c
 Porter, Mary Eliza
 Potter, Ellis David
 Poulsen, Frank Edward
 Powers, Mary Eileen t c
 Preston, Esther Anne t c
 Putman, Russell Lorain
 Raimsey, Mable Watson t c
 Ramsey, John Robbins
 Rasmussen, Vilas Lenor
 Ratty, Frank John m
 Raymond, Bernard
 Reetz, Otto Anton
 Reid, Dorothy Emma
 Rennebohm, Oscar
 Renton, Allan
 Rice, Marion Elaine
 Richards, Alberita Napier
 Richards, Dolores Millicent t c
 Rietbrock, Dorothy
 Rindy, Ethel Genevieve t c
 Ristow, Olga Belle t c
 Ritter, Isabell Elizabeth
 Roberts, Junius Sturges
 Robertson, Jen Marie
 Robinson, Alma Edith t c
 Robinson, Margaret Ann
 Rogers, Alfred Moore
 Rogers, Lucy Ella
 Rohm, Harold Valentine
 Rohrs, Helen Natalie
 Roseman, Max

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Duluth, Minn.
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Kimball
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Lake Geneva
Green Bay

Ross, Dorothy
 Rossiter, Eva Lacile t c
 Rothwell, Paul Taylor
 Royce, Elizabeth
 Rudd, Ingeborg Elizabeth
 Ruehl, Wilbur Herman m
 Ryan, Genevieve Ingersoll
 Sanford, Marian Elizabeth t c
 Sapp, Gladys Marguerite
 Saunders, Grace Margaret
 Saunders, Otis Warren m
 Sawyer, Estelle Julia
 Scanlan, Marian Eunice Frances t c
 Schiller, Armand Robert
 Schmidt, Elsa Wilhelmina t c
 Schmitz, Herbert Walter m
 Schrieter, Herbert Gustave t c
 Schustedt, Sarah Charlotte t c
 Schweizer, Elinore Louise
 Scott, Dorothy Belle
 Searls, Fern Horton t c
 Sennett, Margaret Devlin t c
 Sharpe, Elizabeth Lucy t c
 Shepherd, Grace Lynoi
 Shepherd, Maud Agnes
 Shortess, Lois Fuller
 Simenson, Oscar
 Simonds, Paul William m
 Simonson, Marion
 Simpson, Edward Eber, Jr. m
 Simpson, Helen Winifred
 Skaar, Martha Olea
 Skemp, Thomas Harry
 Slater, Harry Vergil
 Sletteland, Oscar Bernard
 Slichter, Allen McKinnon
 Smalley, Gwynette Ellsworth
 Smith, Bessie Jenkins
 Smith, Harold David
 Smith, Katherine t c
 Smith, Nettie May
 Snell, Harriet
 Spencer, Adah Porter
 Sprague, Mildred
 Stack, Sylvester Stephen m
 Stanchfield, Madelyn Elizabeth
 Statz, Rosalin Catherine t c
 Stauffer, Norma Hoffman t c
 Steckbauer, Joseph Whittier m
 Stenjem, Eldon Mandt
 Stephan, Carl Thompson m
 Stephenson, Ralph Everett
 Stevenson, Carlisle Edward

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 La Crosse
 Maywood, Ill.
 Grand Rapids
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 Rock Island, Ill.
 Rewey
 Platteville
 Charleston, Ill.
 La Crosse
 Milwaukee
 Tomah
 Oshkosh
 Madison
 La Crosse
 La Crosse
 Sturgeon Bay
 Pigeon Falls
 Madison
 Cuba City
 Milwaukee
 Platte, S. Dak.
 Columbus
 River Falls
 Oshkosh
 Chicago, Ill.
 St. Joseph, Mo.
 Milwaukee
 Fond du Lac
 Madison
 Appleton
 Oshkosh
 Madison
 Chicago, Ill.
 Indianapolis, Ind.
 Marinette

Stewart, Mildred Virginia
 Stewart, William McKinley
 Stier, Dimple Rhea t c
 Stolte, Ruth Lucile
 Stolze, Joseph Ariel
 Straus, Michael Wolf
 Sucher, Ralph Gunn
 Sullivan, Angela Hope t c
 Sullivan, John Drepperd
 Sutherland, Judson Clare
 Swendson, James Jay m
 Taber, Jessie
 Tarrant, Ella Almira
 Taylor, Joseph Clark
 Taylor, Sarah Jane
 Teckemeyer, Russell Arthur
 Termansen, Hans Peter
 Thieme, Cyrus Charles l
 Thompson, Olga Christiane
 Titus, Alberta Margaret t c
 Tormey, Loretto Eden
 Tredwell, Lillie
 Tuchscherer, Frank Adam
 Tufts, Ruth Anna t c
 Turner, Alice t c
 Twells, Geneva Anna
 Uppgren, Inez Edna
 Utman, Beatrice Violet
 Van Den Berg, William John m
 Vander Bie, Chauncey Learen t c
 Vander Bie, Miriam t c
 Vanderbie, Roscoe m
 Voigt, Luella Frances
 Vose, Mary Ann Scott
 Wackman, Charline Marie
 Wade, Margaret Moore
 Walser, Dora May t c
 Warner, Mary Vivian
 Warren, Lucille Anna t c
 Watson, Allen Smith m
 Weber, Carl Joseph
 Webster, Margaret Rebecca t c
 Weidenfeller, Eleanor
 Weix, Joseph Branick
 Werden, Esther Winifred
 Wessinger, Mary Esther t c
 Wheeler, Warren Gregg
 White, Cleveland J.
 White, Leon Oliver
 White, Marcus Dee m
 White, Olive Annie
 Whittet, James Lowell
 Wickwire, Nina Mary

Bozeman, Mont.
 Chicago, Ill.
 Whitewater
 Reedsburg
 Wausau
 Hinsdale, Ill.
 Peoria, Ill.
 Dubuque, Iowa
 Dubuque, Iowa
 Eau Claire
 Amherst
 Madison
 Chicago, Ill.
 Logansport, Ind.
 Two Rivers
 Madison
 Sawyer
 S. Milwaukee
 Wausau
 Fond du Lac
 Madison
 Chicago, Ill.
 Menasha
 Withee
 Port Washington
 Logansport, Ind.
 River Falls
 Hudson
 Madison
 Platteville
 Eau Claire
 Platteville
 Oconomowoc
 Macomb, Ill.
 Oregon
 Muscoda
 Northwood, Iowa
 Chicago, Ill.
 Baraboo
 Madison
 Pewaukee
 Milwaukee
 Highland
 Beaver Dam
 Chicago, Ill.
 Duluth, Minn.
 Wauwatosa
 Shullsburg
 Madison
 St. Louis, Mo.
 Madison
 Edgerton
 Maquoketa, Iowa

Wiener, Ingeborg
 Williams, Clara Bassett t c
 Williams, Dorothy Mae
 Williams, John Webster m
 Wilmanns, Gertrude Meta
 Wolfe, Ruth Matilda
 Wood, Frances Carolyn
 Wright, Cornelia
 Ziegler, Mabelle Gertrude t c
 Zum Brunnen, Hazel Irene t c

Chicago, Ill.
 Whitewater
 Gettysburg, S. Dak.
 Milwaukee
 Milwaukee
 Sun Prairie
 Denver, Colo.
 Winona, Minn.
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Course in Commerce

Achenbach, Lester William
 Andrews, Charles Lippincott
 Austin, Carlton Leroy
 Babcock, William James Carey, Jr.
 Baldwin, Eden John
 Balmer, Stanley Leslie
 Belsky, Max Benard
 Berg, Edwin Louis
 Biller, Jacob Robert
 Birch, Frank Victor
 Bird, George Eaton I
 Bishop, Lawson Waterman
 Blake, Gilman Dorr
 Blatz, Alvin Charles
 Bloom, Julien Louis
 Boehne, John William, Jr.
 Boeing, John Kruggel
 Brennan, Rowland Edward
 Brown, Lee Markham
 Bryant, Harold John
 Burnside, Harlow Davis
 Buser, Earl Jones
 Bush, Henry Huson
 Chandler, Arthur Luther
 Cleary, Thomas Louis
 Collins, Harold Cornelius
 Colman, Charles Edward
 Connor, Eugene Peter
 Curtiss, Frederick Willard
 Dahlman, Frank J.
 Donovan, James Rowells
 Drowatzky, Earle Frank
 Dutcher, Harry Roy
 Eaton, Everett Hall
 Ellman, Ben Louis
 Emmerich, Carl Mallery
 Entrop, Frank Joseph
 Erdmann, Arthur Albert
 Evans, Bryant McAllister
 Fairweather, Carl William

Alma
 Moorestown, N. J.
 Grand Rapids, Mich.
 Rensselaer, Ind.
 Milwaukee
 Chicago, Ill.
 Dubuque, Iowa
 Onalaska
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 Fond du Lac
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 Mallet Creek, Ohio
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 Evansville, Ind.
 Fargo, N. Dak.
 Baraboo
 St. Louis, Mo.
 La Crosse
 Washington, D. C.
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 Plymouth
 Madison
 Platteville
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 La Crosse
 Madison
 Madison
 Kingsville, Tex.
 Waupun
 Tomah
 Whitewater
 Chicago, Ill.
 Madison
 Park Ridge, Ill.
 Racine
 Sheboygan
 Waupaca
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Farley, Donald Stephen
 Ferguson, William Friend, Jr.
 Foskett, Horace Webster
 Fox, Conrad Marion
 Fuhrmann, Frederick William
 Funke, Frank Joseph
 Ganswindt, Albert Henry
 Gasser, Mathew Harold
 Golden, Demmer
 Goul, Marvin Clifford
 Groat, John Leland
 Hanson, Arthur Guy
 Hanssen, John Louis
 Harrison, Don Edward
 Hart, Irene Eleanor
 Hawkes, Rollin Curtis
 Hemming, Victor Edward
 Hendrickson, Clarence Waldemar
 Hill, Byron MacLead
 Hill, George Albert, Jr.
 Hinton, George William
 Hoffman, Sidney Guy
 Hogan, Leo Montgomery
 Holman, Cecil Lloyd
 Holzberg, Philip Paul
 Hughes, Frank Lyman
 Johnson, Welton Ellery
 Josephson, Clarence Egbert
 Karcher, Raymond Eduard
 Kerch, John Garver
 King, Marvin Stephen
 Kittleman, Halford Harrison
 Laun, Albert Louis
 Lawrenz, Roy Herman
 Lentz, Alvin Edward
 Levy, Robert Ferdinand
 Lindberg, Gustaf Heimer
 Lins, Cecilia Marie
 Lipschutz, Hyman Stanley
 McCoy William John
 McGinnis, Donald William
 McMurry, Morland John
 Marshall, Thomas George
 Marshall, William Hughes
 Meier, Paul Adrian
 Merrill, Willard Doris
 Metz, Henry Lawrence
 Miller, James Christolph
 Moffatt, Edwin Aldons
 Moody, John Lawrence
 Morrissey, Raymond Peter
 Moses, Victor Clinton
 Mungavin, James Francis

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Nave, Cyril Winton
 Nicoll, Harold Vincent
 Noer, Harold Rolf
 Nuzum, William Alva
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 Olshesky, Alexander Joseph
 O'Neill, Clifford Richards
 Packard, Vernon Wing
 Perkins, John Raymond
 Pollack, Harry Arnold
 Pribnow, Harry Warren
 Quigg, Eugene Kramer
 Razook, George
 Reichenbaum, Doré
 Reif, Carl William
 Reynolds, Russell Burton
 Rhodes, Edwin James
 Richardson, James Marston
 Roberts, Harvey Earl
 Salit, Zigmund
 Schmidt, George Arthur
 Schmitz, Karl Mathias
 Schubert, Harold John
 Schultz, Armin Daniel
 Schwartz, William
 Sherwood, John Newton
 Silbernagel, George John
 Steele, Daniel Howard
 Stone, Gerald Daum
 Stout, Sidney Allerdice
 Suhm, Herbert Ralph
 Syburg, Frederic Gaffron von
 Teare, Daniel James
 Templeton, Wallace
 Thoreson, Andrew Theodore
 Trautmann, John
 Van Natta, Leslie Walter
 Vanden Braak, Gail
 Warner, Barton Kerr
 Weeks, Harold Parker
 White, Donald William
 Widman, Paul Stevens
 Williams, Edwin Giddings
 Willis, Walter Weldon

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Banker, Louis Curtis
 Bassford, George Ainslee
 Bentley, Frances Ruth
 Bowden, Bernard Ray
 Bowden, Beulah May
 Boyce, Ella Martha

Richland Center
Madison
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Brooks, Beatrice Florence
 Brown, Allan G.
 Buehler, Gertrude
 Christensen, Bernard Victor
 Colbeck, Elizabeth Bingham
 Corey, Marion Julia
 Eastwood, Ralph E.
 Ellian, Elmer Rufus
 Forseth, Victor Edward
 Fuller, Eleanor
 Grimm, Marvel Mary
 Hopkin, Ruth
 Isaacson, Myrtle May
 Keeley, Florence Rose t c
 Mueller, Alfred Dominic
 Murphy, Martin Michael
 Nichols, William Edward
 O'Reilly, Margaret Elizabeth
 Parent, Charles William
 Peterson, Ruth Agnes t c
 Pett, Harris Graw
 Reichle, Theresa Margaret
 Robinson, Ellis Nelson
 Sanford, Lion Waldo
 Schultz, Henry David
 Schwerdt, Mathilde Angela
 Shilling, Ida Ruth
 Taylor, Sarah Helen
 Toner, Marjorie Ethel
 Van Beek, Cora
 Waddell, John Frank
 Washburn, Katharine Clark
 Wetmore, Ruth t c
 Wilkinson, Nellie Beth t c

Pound
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Alma
Westfield
Superior
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Cassville
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Superior
Hudson
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Mountain Lake, Minn.
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Viroqua
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Aberdeen, S. Dak.
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Janesville
Lancaster

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Course in Chemistry

Beqman, Lyman Anderson
 Black, John Herman
 Braun, Harold
 Cauwenberg, Winfred Joseph
 Cole, Gordon Manley
 Dickinson, Sheldon James
 Domogalla, Bernhard Paul
 Downey, Hugh Henry
 Epstein, Samuel Noah
 Fowler, William McKinley
 Friess, Ralph
 Henningsen, Carleton
 Hetland, Victor Adolph
 Hickey, Philip John
 Keebler, Irvin Wallace

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Chicago, Ill.
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Viroqua
Cleveland, Ohio
Milwaukee

Koehler, Alfred E.
 Kraemer, Elmer Otto
 Lederer, Fred Ben
 Olson, Walter Oliver
 Preiser, Godfrey Krause
 Quentmeyer, Philip Carl
 Quick, Armand James
 Schuler, Catharine Ellen
 Shepard, Chester Elmore
 Smith, Perry Coke
 Starkweather, Ida Farr
 Urech, Otho James
 Warner, Charles Law
 Wendt, Herbert Carleton
 Wessel, Henry Hermann Edward
 Westcott, Ray Delos
 Wolf, Henry Nicholas

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Course in Journalism

Arnold, Waldo Robert
 Barlow, Reuel Richard
 Browne, Marshall Francis
 Burch, Harriet Imogene
 Doherty, Mary Louis
 Hefferan, Thomas Edward Daley
 Hendricks, Marjorie E.
 Kohr, Hugo John
 McCormick, Harriet Eunice
 Miller, Carl
 Munro, Caroline Walker
 Puchner, Irving Alfred
 Spensley, Sarah Amelia
 Swan, Harold Johnson
 Tucker, Frank Thomas
 Wallis, George Earl
 Wight, Walter Greenwood

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Peoria, Ill.
Chippewa Falls
Princeton, N. J.
Edgar
Minneapolis, Minn.
Mazomanie
Milwaukee
Rochester
Madison

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General Course

Bigelow, Lowell Rumsy t c
 Evans, Thomas Iorwerth
 Guy, Albert Kingsley t c
 Kohl, Clarence Elmer t c
 Powell, Henry Miller l
 Wolfers, Robert Charles

Madison
Milwaukee
Seattle, Wash.
Hurley
Reedsburg
Hopkins, Mo.

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Sophomores

Alexander, Trent
 Ashby, Sarah Elizabeth
 Aszmann, Paul Eric
 Baer, Edwin Ben
 Barker, George Stevenson
 Bartholf, Winifred
 Bartz, Mildred Barbara
 Bauer, Carl Philip
 Beach, Joseph Barnes
 Benisek, Helen Annette
 Bents, Zelda Caryl
 Benz, Karl John
 Beyer, Sylva
 Bicknell, Constance Beverly
 Biederman, Lucille Wilhelmine
 Bierbauer, Vera Louise
 Binder, Walter James
 Bird, James Norman
 Bjornson, Marvel Milne
 Bohan, Mary Zilpha
 Boll, Kathryn Mae
 Borden, William Henry
 Born, Lucile Dorothy
 Boutin, Anna Rose
 Boutin, Hiller George
 Bower, Irene Angela
 Bradford, Margaret Veronica
 Bradley, Gertrude
 Bray, Grace Catherine
 Breyley, Captola Rae
 Briggs, Norman Randolph
 Brittingham, Louis George
 Brogan, Katherine Ruth
 Brown, Clifton Martin
 Brown, Kathryn Kent
 Brown, Reuben Samuel T.
 Bruegger, Erwin Kehr
 Bruns, Darwin Elroy
 Bruns, Henry Albert
 Bucknam, Marian McDonald
 Burke, Thomas Nicholas
 Byers, Ruth
 Cape, Thomas Wilson
 Carpenter, Charles Hand
 Charles, Ruth Eva
 Christensen, Charline Mary
 Chu, Keats Lynn
 Chubb, Mavis Adelaide
 Churchill, Norma Eleanor
 Clark, Berta Fern

Madison
 Indianapolis, Ind.
 Portage
 St. Paul, Minn.
 Cleveland, Ohio
 Glencoe, Ill.
 Bozeman, Mont.
 Mandan, N. Dak.
 Whitehall
 Antigo
 Madison
 Canton, S. Dak.
 Rutherford, N. J.
 Washington, D. C.
 Duluth, Minn.
 Mankato, Minn.
 Newport, Ky.
 Milwaukee
 La Moure, N. Dak.
 Avoca
 Rice Lake
 Madison
 Toledo, Ohio
 Bayfield
 Bayfield
 Ashland
 Mineral Point
 Milwaukee
 Elkhorn
 Wadsworth, Ohio
 Corymans, N. Y.
 Los Angeles, Cal.
 Ironwood, Mich.
 Madison
 Rhinelander
 Madison
 Williston, N. Dak.
 Morrisonville
 Morrisonville
 Antigo
 Wayside
 Coldwater, Mich.
 Dodgeville
 Racine
 Madison
 Madison
 Ningpo, China
 St. Louis, Mo.
 Monroe
 Council Bluffs, Iowa

Clarke, Ernest
 Clarke, Mary Sterling
 Cleveland, Chester Emery, Jr.
 Coapman, Vida Alice
 Cobban, Lorraine Margaret
 Cody, William Francis
 Coleman, Arthur Leonard
 Conkey, Ruth Taylor
 Conklin, Lauretta Bugher
 Conley, Henry Harold
 Conlin, Ruth Margaret
 Connell, John William
 Conway, Paul Hoffmann
 Cook, Ogden
 Cooper, Gloria Olive
 Cosgrove, Frank William
 Coulthard, Wilda Joyce
 Cox, Linton Alden
 Croskey, William Winslow
 Cunningham, Lawrence Eugene, Jr.
 Curran, Richard Francis
 Dahle, Artman Harvey
 Dana, Eleanor Fairchild
 Darling, Lorenzo Lyman
 Davis, Lois Adelyn
 Delaney, William Francis
 Deuss, Edward Louis, Jr.
 Dickelmann, Lorin Elmer
 Dimond, Dorothy Sara
 Dinkwitz, Oscar
 Dobie, Catherine Anna
 Donacelski, Florence Agatha
 Donkle, Annetta
 Douma, Eddina Pauline
 Dunn, Calvert Zeph
 Dyson, Doris Elinor
 Edwards, Lillian Marguerite
 Eger, Harold Anderson
 Eimon, Ora Signe
 Eldridge, Irene
 Elsom, Bernardo Whitfield
 Elston, Frances Marie
 Emerson, Louise Lindsley
 Engel, Adolph Charles
 Ernst, Leo Wainright
 Escabi, José
 Evans, Catherine Carol
 Evans, Margarita
 Evans, Mildred Campbell
 Ewe, Joeina Mary
 Exley, Erwin William
 Fairchild, Evelyn Van Zandt
 Faith, Don Carlos

Hull, England
 York, Nebr.
 Chicago, Ill.
 Kilbourn
 Madison
 Fond du Lac
 Ashton, S. Dak.
 Superior
 Winnipeg, Mani'toba
 Cazenovia
 Madison
 Fond du Lac
 Watertown
 Milwaukee
 Merrimack
 Fond du Lac
 Benton
 Indianapolis, Ind.
 Madison
 Beloit
 Edgerton
 Sun Prairie
 Eau Claire
 Manawa
 Frankfort, Ind.
 Milwaukee
 Sheboygan
 Milwaukee
 Albany, Ill.
 Marinette
 Superior
 Preston, La.
 Ft. Atkinson
 Sheboygan
 Chicago, Ill.
 Viroqua
 Ft. Atkinson
 Ishpeming, Mich.
 Superior
 Tomah
 Madison
 Duluth, Minn.
 Ekalaka, Mont.
 Caroline
 Chicago, Ill.
 Mayagüez, P. R.
 Madison
 Boonville, N. Y.
 Grand Rapids, Mich.
 La Crosse
 Menasha
 Silver Creek, N. Y.
 Washington, Ind.

Falk, Gustave Rudolph
 Falk, Karen Fredrikka
 Farley, Lenora Agnes
 Fay, Marion Elizabeth
 Fellows, Gladys
 Ferger, Wirth Fitch
 Field, Harold Manoel
 Finsky, Morris
 Fisher, Eleanor
 Fisher, Marjorie Katherine
 Fitzgerald, Robert Drake
 Flaherty, Marian
 Flower, Gretta Leonore
 Focke, Wilhelm John
 Foster, Carlton Harwood
 Francis, Marguerite Arline
 Frazier, Mildred Lucile
 Frederickson, Edna Virginia
 Freymiller, Ernest Fred
 Frish, Evelyn Agnes
 Frye, Miriam Louise
 Funk, Dorothy Konradine
 Gehr, Bertha
 Geiger, Mary Bernice
 Gerber, Estelle Marjorie
 Gibbon, Martha Gladys
 Gillis, Clare Dorothy
 Goldberg, Benjamin
 Goldmann, Madelaine Henriette
 Gough, James Arthur
 Grace, Dorothy Patterson
 Gray, Helen
 Greenberg, James Edward
 Greenspon, Fannie
 Gregory, Maklem Wallis
 Gronfeldt, Esther Susan
 Gross, Alma Eleanor
 Groves, Harold Martin
 Hadley, Ella Josephine
 Hafner, Irene Mary
 Haker, Milton Albert
 Haley, John Wendell
 Hanson, Rudolph
 Hardy, Charles Stave
 Harker, Myra Susan
 Harkes, Barbara
 Harrington, Florence Mary
 Harrington, Hannah Truesdale
 Hart, Mabel Beth
 Hatch, A. Eugene
 Hay, William J., Jr.
 Hayes, Louis James
 Hayes, Matthew Raymond

Spooner
Stoughton
Madison
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Racine
Chattanooga, Tenn.
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Chicago, Ill.
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Woodman
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Des Moines, Iowa
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Ligonier, Ind.
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Superior
Antigo
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Sugar Bush
Oak Park, Ill.
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New York, N. Y.
Appleton
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Hurley
Duluth, Minn.
Lodi
Oregon
Oak Park, Ill.
Portage
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Superior
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Madison
Coal City, Ill.
Milwaukee
Rock Creek, Ohio
Hillsboro
Spring Green
Oshkosh
Janesville
Milwaukee

Hayssen, Irma Charlotte	Madison
Head, Dorothy Brandon	Madison
Head, Elizabeth Rachel	Madison
Heddles, Rena	Madison
Hedquist, Oscar Arthur	Madison
Helgren, Fred Joseph	Florence
Hemsing, James Franklyn	Milwaukee
Herrick, Donald Lukes	Milwaukee
Higbie, Nathan Bradley, Jr.	Chicago, Ill.
Hipke, Lucius Warrington	Milwaukee
Hjermstad, Marie Emily	Red Wing, Minn.
Hoffman, Esther Clara	Madison
Hogan, Beatrice Muriel	Madison
Hokamp, Hester Louise	Burlington, Iowa
Hole, Dean	Chicago, Ill.
Holt, Ejhel May	Cambridge
Howard, Joseph Elwyn	Madison
Howe, Helen Huntley	Lake Mills
Howison, William	Menomonic
Hoyer, Edward Ludwig Fredrick	West Bend
Hoyer, George Henry Christian	West Bend
Haieh, Hsueh Hai	West Gale, Wusih, China
Huegel, Lillian Elizabeth	Madison
Hughes, Ruth Anne	Downers Grove, Ill.
Hummel, Fred Edgar	Milwaukee
Hunt, Rhea	Barronette
Huntley, Alton Karl	Clyd, Ohio
Ilett, Willard Everett	La Grange, Ill.
Jacobs, Gertrude Margaretta	Reedsburg
Jennings, Blandford	Washington, D. C.
Jensen, Dagmar Christine	Racine
Joannides, Minas	Madison
Johnson, Howard Lawrence	Racine
Johnson, Margaret Ruth	Portage
Johnson, Roscoe Edwin	Eureka, Kans.
Johnston, Mildred Lyne	Fort Atkinson
Jones, Donald Coffin	Billings, Mont.
Jones, Doris Elizabeth	Madison
Jones, Elbert William	Waupun
Jones, Thelma Fay	Madison
Kahlenberg, Hester	Madison
Karger, Ralph Simon	Milwaukee
Kayser, Paul	Milwaukee
Keller, Fanny Margaret	Madison
Kellog, Horace Banter, Jr.	Antigo
Kerns, Beulah Margaret	Moline, Ill.
Kerswill, Emily Louise	Park Falls
Keyes, Mary	Madison
Kieckhefer, Herbert Martin	Milwaukee
Kieckhefer, Hilda Louise	Milwaukee
Kimball, Charles Leonard, Jr.	Oak Park, Ill.
King, Florence Harriet	Milwaukee
Kleven, Garnet Estell	Mt. Horeb

Klug, John Leslie
 Kramer, Paul Stevens
 Kuenzli, David Benjamin
 Kupfer, Harriet Angeline
 La Due, Laura Bert
 La Follette, Philip Fox
 La Follette, Robert Marion, Jr.
 Lamb, Jeanette Jones
 Lamoreux, Vera Rosalind
 Larkin, William James
 Larsen, Esther Amelie
 Lathrop, Margaret
 Lee, Burr Eduard
 Lemm-Marugg, Carl
 Lesh, Charlotte Bradley
 Lewis, Lillian Lucile
 Lewis, Margaret Jane
 Liebermann, Lucile Sara
 Lindsay, Russell Gilbert
 Littig, Alice Gertrude
 Littig, Lawrence Victor
 Lloyd, Edwina Turner
 Lohe, Irene Leon
 Ludlow, Evelyn Charlotte
 Lyon, Cora Esther
 Lyons, Edith Roberts
 McCandless, Donald Sisson
 McCarthy, Emerson Joseph
 McDonald, Blanche Lois
 McGarty, Michael Edwin
 McKay, Frances Josephine
 McKeague, John Jay
 McKee, Wilna Russell
 McLeod, Imogene Doris
 Maack, Fred William
 Maher, Catherine Mary
 Maher, Evangeline Genevieve
 Mailer, Andrew Robert
 Manring, Eric Hammond
 March, Mildred
 Marks, Harold Eugene
 Markus, Norbert William
 Marquardt, Gladys Eugenia
 Marsh, Gladys Margaret
 Marshall, Charles Robert
 Maurer, Catherine
 Mautz, Cora Amalie
 Melby, Eva
 Melnikow, Maurice
 Mengelberg, Walter Rudolf
 Merchant, Edythe Mae
 Merz, Aline Adeline
 Meulcmans, August Martin

Lake Geneva
Faribault, Minn.
Milwaukee
Kenosha
Luverne, Minn.
Madison
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Erie, Pa.
Mayville
Whitewater
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Beloit
Hamilton, Mont.
Indianapolis, Ind.
Macfarland
Madison
Watertown
Milwaukee
Davenport, Iowa
Davenport, Iowa
Ravinia, Ill.
Manitowoc
Monroe
Brandon
La Crosse
Davenport, Iowa
Ponce, Nebr.
Beaver Dam
Mauston
Fall River
Wautoma
Houston, Tex.
Garnet, Mich.
Chicago, Ill.
Milwaukee
Minneapolis, Minn.
Depere
Gaston, Ind.
Warren, Ohio
Madison
Quincy, Ill
Wausau
Madison
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Milwaukee
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Ellendale, N. Dak.
Madison
Wrightstown

Meyer, Ernest Louis
 Miller, Marion Rachel
 Millikin, Kathleen
 Mitchell, Prescott Talman
 Moe, Orpah Ruth
 Moe, Sigrid Winifred
 Montgomery, Allen Darnell
 Montgomery, Robert Bresse
 Moore, Charles Francis
 Moore, David Weston
 Moore, Warren Gillespie
 Morman, Wade Hampton
 Morris, Francis Joseph
 Mueller, Clara Ernestine
 Mueller, Walter Edward
 Mugge, Lucile Elizabeth
 Munson, Catherine Olive
 Murphy, Brynhilde Josephine
 Murphy, Ellida
 Murray, Robert Oliver
 Murray, Walter Clinton
 Muther, Alice Marie
 Myrland, Eiel Harmon
 Naeckel, Harold William
 Nelson, Dewey Vanard
 Nelson, Eleanor Du Mars
 Nelson, Ernest Darandas
 Nelson, Juanita Isabelle
 Nelson, Laura Marsh
 Netherwood, Mirbell Annie
 Newcomer, David Albert
 Newman, Rose Katherine
 Noetzel, Gertrude Murilla
 Nolte, Claire
 North, Reynolds Bacon
 Northam, Edna Mae
 Nystrom, Elizabeth Ruth
 Ochsner, Bertha
 Odegard, Ethel Jannette
 Odegard, Helena Martinsen
 O'Laughlin, Eleanor Margaret
 O'Laughlin, John Richard
 Olesen, Martha Helena
 Olin, Doris Louise
 Olin, Irene Hazel
 Olson, Mamie Isabella
 Olson, Oscar Albert
 O'Malley, Stella Ethelbert
 Oppenorth, Irene Kathryn
 Ormond, Roy Bazanquith
 Osburn, Burl Neff
 Osgood, Wayland
 Owens, Elizabeth Isett

Milwaukee
Markesan
Hamilton, Ohio
Cincinnati, Ohio
Chetek
Chetek
Wichita Falls, Tex.
Madison
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Onalaska
Chicago, Ill.
Wausau
Timothy
Milwaukee
Davenport, Iowa
Harrisburg, Ill.
Viroqua
Stoughton
Berlin
Madison
Shell Lake
Oak Park, Ill.
Mauston
Davenport, Iowa
Darlington
Luverne, Minn.
Arcadia
Lodi
Madison
Madison
Washington, D. C.
Madison
Waukesha
Davenport, Iowa
Green Bay
Madison
Wheaton, Ill.
Chicago, Ill.
Merrill
Madison
Madison
Madison
Humboldt, Iowa
Florence
Florence
La Crosse
Galesville
Madison
Kewaskum
Brookfield
Madison
Windsor
Dixon, Ill.

Padley, Grace
 Pain, Charles Esmond, Jr.
 Pardee, Florence Mae Miller
 Parker, Louisa
 Pasewalk, Gladys
 Patterson, Dorothy Jean
 Peck, Margery
 Pein, Jane von
 Fellow, Chauncey James
 Perlman, Jacob
 Peterson, Margaret Irene
 Pfister, Mildred A.
 Phelps, Clarence Henry, Jr.
 Pieh, Addie Emma
 Pilpel, Emily Marion
 Piper, Purcell William
 Pleuss, Viola Elfrieda
 Pollard, Seth Whitely
 Pomeroy, Leslie Klett
 Porterfield, Alice Viola
 Post, Julia Harriet
 Prueter, Arthur Paul
 Prussing, Ernest John
 Puckett, Mildred Vail
 Purcell, Ruth Helen
 Quigley, Vernon James
 Ramsay, Susan Bowen
 Rathbun, James Malen
 Reed, Harold West
 Reid, Velma Agnes
 Reiman, Marie Agnes
 Reinking, Margaret Beatrice
 Richter, Charles Frederic Rand
 Ritchie, Catherine Jean
 Roberts, Arnol Victor
 Robinson, Kathleen Mary
 Roehm, Ruth Madolyn
 Rogers, Ezra Hazelton
 Ross, Frank Alsworth
 Roth, Rada Rosalind
 Ruder, Clara Louise
 Rudy, Paul Passmore
 Rufsvold, Mildred Priscilla
 Runden, Randolph Hall
 Ruston, Margaret
 Sage, Donald McCormack
 Sandrock, Laura Mae
 Saul, Lulu Estelle
 Schaffer, Clarence Keisling
 Schmidt, Herbert Glueck
 Schmidt, Irma Bertha
 Schmitz, Raymond Hubert
 Schneiders, Edwin Francis

Lodi
Chicago, Ill.
Madison
Clinton
Norfolk, Nebr.
Madison
Berlin
River Forest, Ill.
Mineral Point
Madison
Delavan
Madison
Milwaukee
Madison
New York, N. Y.
Milwaukee
Madison
Lannon
Madison
Kansas City, Mo.
Madison
Kiel
Chicago, Ill.
Rock Rapids, Ia.
Hampton, Iowa
Antigo
Madison
Webster, S. Dak.
Elkhorn
Hurley
Terre Haute, Ind.
Madison
Milwaukee
Jefferson
Wild Rose
Green Bay
Ashland
Hartford
Madison
Fowler, Ind.
Wausau
Madison
Marinette
Kansassville
Evansville, Ind.
Delavan
Madison
Douglas, Wyo.
La Crosse
Milwaukee
Evansville, Ind.
Madison
Marathon

Schnug, William
 Scholtz, Theodore Livingston
 Schroeder, Elinor Marie
 Schroeder, Nico Viola
 Schulte, Margaret
 Schultz, Margaret Charlotte
 Schwebs, Lorena Elizabeth
 Scott, Harry Hegg
 Seeley, June
 Semrad, Paul August
 Sevringhaus, Lois Katherine
 Sexton, Marjorie Jean
 Shaw, Marlys Dove
 Shimpa, Joseph Frank
 Sinaiko, Josie
 Sinaiko, Sohnia
 Skinner, Helen Harriet
 Slight, George Rigby
 Smith, Carol Josephine
 Smith, Emmett Patrick
 Smith, Helen Belle
 Smith, Mary Ruth
 Snodgrass, Etha Cleaver
 Sonnenburg, Willard Michael
 Speer, Bedell Hudson
 Spengler, Silas Llewellyn
 Stander, Arthur Earl
 Stark, Harold
 Stearns, Rachel Elizabeth
 Steudel, Esther
 Stevens, Sara Pay
 Stickle, Phoebe Elizabeth
 Stockwell, C. George
 Sumner, Catherine Clawson
 Sutton, Robert Mage
 Swerig, Ada Lois
 Taylor, Bessie Lillis
 Taylor, Cornelia Katheryne
 Taylor, Harold Beecher
 Temme, William Ford
 Tener, Virginia Simpson
 Thornton, Eva May
 Thwaites, Mabel
 Tigay, Bertha Sophia
 Tilleman, John Francis
 Toennies, Ernest August, Jr.
 von Toerne, Dorothy Augusta Louise
 Townsend, Eleanor
 Tripp, Leslie Robert
 Tyndall, Harold Reed
 Vanatta, Agnes Catherine
 Van Deursen, Ruth
 Van Hise, Alice Ring

Bonduel
Madison
Cleveland, Ohio
Geddes, S. Dak.
Freeport, Ill.
Milwaukee
Madison
Mondovi
Mt. Pleasant, Iowa
Chicago, Ill.
New Albany, Ind.
Marshfield
Parkston, S. Dak.
Boscobel
Madison
Madison
Madison
Peshigo
Grinnell, Iowa
Madison
Madison
Madison
Eugene, Ore.
Sheboygan
Sharpsburg, Pa.
Menasha
Madison
Bayfield
Madison
Chilton
Chicago, Ill.
Cottage Grove
Spooner
Madison
Peoria, Ill.
Madison
Glenhaven
La Crosse
Chicago, Ill.
Berlin
Wheeling, W. Va.
La Valle
Milwaukee
Chicago, Ill.
Green Bay
Sheboygan
Madison
Sycamore, Ill.
Madison
Merrill
Brookston, Ind.
Dolton, Ill.
Madison

Vasey, Ethel Lois
 Vernon, Jane Elizabeth
 Vickery, Clara Maude
 Vingom, Clair Odin
 Vivian, Robert Stansmore
 Wahl, John Jacob
 Wallrich, Lucy Angeline
 Walton, Ruby La Verne
 Ward, Edna Margaret
 Ward, Elizabeth Lane
 Watson, Robert Dean
 Weddendorf, Arno Herman
 Weers, Leland Henry
 Weimar, Elizabeth Christine
 Weisse, Harvey Jennings
 Whelan, Allen
 Whelan, Anna
 Whitbeck, Florence
 White, Dora Marguerite
 White, Ruby Claire
 Whiteaide, Katherine Page
 Whitlock, Robert Laird
 Wise, Gladys Minnie
 Wishniefsky, Ben M.
 Wollin, Evelyn Anna
 Woodward, King Grier
 Works, Lucile Ruth
 Wright, Robert Williams
 Wroe, Gerald Dillon
 Yabroff, Anne
 Yabroff, Bertha Dorothy
 Young, Martha Grace
 Young, Roy D.
 Ziesel, Lora Celista
 Zillmann, Ruth Th

Menomonie
 Madison
 Evansville, Ind.
 Clew, Mont.
 Madison
 Milwaukee
 Shawano
 Scales Mound, Ill.
 Sioux City, Iowa
 Madison
 Aurora, Ill.
 New Ulm, Minn.
 Peoria, Ill.
 La Crosse
 Sheboygan Falls
 Mondovi
 Mondovi
 Madison
 Mineral Point
 Madison
 Louisville, Ky.
 Gettysburg, S. Dak.
 Madison
 Milwaukee
 Oconomowoc
 Peoria, Ill.
 Madison
 Belvidere, Ill.
 Chicago, Ill.
 Fond du Lac
 Horicon
 Memphis, Tenn.
 Galesville
 Elkhart, Ind.
 Thorpe

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Course in Commerce

Adams, Gordon Dale
 Anderson, Calmar Thorpe
 Anderson, Earl Canute
 Baker, Herbert Miller
 Ballhorn, Gordon Charles
 Barklow, Ernest Edward
 Bartlett, John Shepard
 Baxter, Marcus Ludwig
 Beaver, Cyril James
 Behrendt, Otto Herman
 Benson, Merrill Manning
 Bergmann, Harold Raymond
 Bergset, Lloyd
 Boardman, Seymour Gust

Evansville
 Chippewa Falls
 Grantsburg
 Zanesville, Ohio
 Bear Creek
 Joliet, Ill.
 Milwaukee
 Madison
 Wausau
 Sterling, Ill.
 Fort Atkinson
 Eau Claire
 Milwaukee

Bohannon, Roland Durfee
 Brown, Porter Harris
 Buckstaff, Angus Griswold
 Campaign, Harry John
 Carroll, Laurence Kinzie
 Chase, Lyle Richard
 Clague, Stanley Richard
 Clasmann, Fred
 Clayton, Thayer Zachariah
 Connell, Arthur John
 Copeland, John Bird
 Craig, Harry Worthington
 Crownhart, George
 Crump, William Gordon
 Curtin, John Leslie
 Dame, Ralph Ward
 Dana, Walter Duncan
 Dohr, Donald
 Doyle, Elmer Michael
 Drew, Francis Leo
 Duwe, Henry J.
 Ebbs, Paul Allen
 Elliot, Horace Reed
 Erdmann, Willard Valentine
 Fenn, Kenneth Newton
 Fladoes, Martin Alfred
 Freese, Herbert George
 Garnsey, Edward Grant, Jr.
 Gass, George Frederick
 Gerrits, Christopher Columbus
 Gibson, John Currie
 Gildermaster, Henry Herman
 Gleerup, William Weston
 Gotfredson, Henry Lawrence
 Grede, William John
 Green, Thomas Henry
 Grieve, Gilbert George
 Gurney, William Walter
 Hardy, Earle William
 Hardy, Robert Roy
 Hatch, Vernon Victor
 Hayden, Clement Donald
 Hayden, James Matthew
 Heilemann, Alfred William
 Hewett, Floyd Fisher
 Horn, William Edward
 Hornaday, Howard Blair
 Hunter, James Jefferson
 Jacobson, Robert Louis
 Jones, George Good
 Judevine, William Kenneth
 Kahn, Herbert Mandel
 Kaiser, William Theodore

Clinton, Iowa
 St. Louis, Mo.
 Oshkosh
 Madison
 Madison
 Ashlon, S. Dak.
 Winnetka, Ill.
 Milwaukee
 Milwaukee
 Beloit
 Jefferson
 Cleveland, Ohio
 Madison
 Madison
 Madison
 Beloit
 National Home
 Madison
 Cobb
 McAlester, Okla.
 Middleton
 St. Louis, Mo.
 Evanston, Ill.
 Sheboygan
 Prophetstown, Ill.
 Menomonie
 Sioux Falls, S. Dak.
 Chicago, Ill.
 Shenandoah, Iowa
 Waupun
 Oshkosh
 Princeton, Ill.
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 Green Bay
 Milwaukee
 Ligonier, Ind.
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 Waukesha
 Ashland
 Eau Claire
 Milwaukee
 Madison
 Jefferson
 Arlington, S. Dak.
 Muskego
 Danville, Ind.
 Milwaukee
 Madison
 Warren, Ind.
 Oakdale
 Appleton
 Chilton

Kircher, Paul Edgar
 Knutson, Oley Elmer
 Kress, Fred Raymond
 Kuhn, Arno George
 Langdon, Byron Clifford
 Langemak, Wesley Erving
 Leopold, Frederic
 Levy, Edward David
 Linchan, Raymond Francis
 Lins, Clemens Michael
 Little, Harvey Bonnell
 McCabe, William John, Jr.
 McDowell, Dyer Silas
 McWilliams, Gerald Shearn
 Maier, Walter Louis
 Malzahn, Walter Ernst
 Mandel, Walter
 Mann, Frederick John
 Marsh, Maitland Barnett
 Martin, Joseph H.
 Matzen, Herbert James
 Mauer, Eugene Dickens
 Meyer, Lawrence Emmons
 Meyers, Ross Bacharach
 Mishelow, Edward David
 Moran, Edward Leonard
 Morrissey, Walter Lee
 Munz, Arthur John
 Mylecraine, Earl A.
 Nelson, Frederick Washington
 Niebergall, Floyd Arthur
 O'Donnell, Frank Rowan
 Olson, William Otto
 Pagel, Herman Emil
 Pantzer, Frederick Morris
 Perkins, Edward Lee
 Peterson, Carl Edwin
 Pinther, Harold Otto
 Plumb, Walter Gerald
 Pogue, Kenneth Hunt
 Poindexter, Early Whitten, Jr.
 Porter, Lyell Potter
 Pratt, Harold James
 Quinn, Thomas John
 Reeves, Joseph Oscar
 Rietow, William Howard
 Rinder, George Henry
 Rogers, Roland Hanks
 Rowlett, John McNess
 Rueth, Peter Alfons
 Sachse, Erwin George
 Sanders, Lloyd Orville
 Saugstad, Albin Theophil

Kiel
 Boscobel
 Tomah
 Kiel
 Pardeesville
 Evansville
 Burlington, Iowa
 Augusta
 Genesee
 Spring Green
 Appleton
 Duluth, Minn.
 Logansport, Ind.
 Milwaukee
 Mellen
 West Bend
 La Grange, Ill.
 Evansville, Ind.
 Omro
 Grand Rapids, Mich.
 Milwaukee
 Madison
 Oshkosh
 Darlington
 Westfield
 Superior
 Bloomington
 Milwaukee
 Philadelphia, Pa.
 Racine
 Pawpaw, Ill.
 Racine
 Wautoma
 Stevens Point
 Sheboygan
 Joliet, Ill.
 Menomonie
 Fond du Lac
 Grand Rapids, Mich.
 Pawpaw, Ill.
 Kansas City, Kans.
 Evansville
 Edgerton
 Waterford
 Albany
 Sheboygan
 Sioux Falls, S. Dak.
 Superior
 Murray, Ky.
 Sun Prairie
 Sheboygan
 Mt. Horeb
 Westby

Schuknecht, Roy John
 Seelbach, Otto Eberle
 Seielstad, Albert Norman
 Shakshesky, Willard Merrill
 Shellenberger, Jack Herbert
 Sherman, Howard Cole
 Sinnen, Harry Peter
 Smiley, Russell Glen
 Smith, Everett Gregory
 Snow, William Patrick
 Stabo, Nils Eivind
 Stamm, Walter Albert
 Steelman, Albert Judson
 Stout, Richard Harding
 Strobe, Loyd Morton
 Stuhler, Frederick Stewart
 Sullivan, Floyd Edmond
 Sweet, Ben
 Thwaites, Edmund Harrison
 Toomey, John Joseph
 Tye, Paul Farrell
 Walters, Henry Benjamin
 Ward, Truman Lane
 Ward, Walter James
 Watkins, Sherman Sheldon
 Welsh, Daniel Scott
 White, Charles Herman
 Wiedenbeck, Gerold
 Wilder, Lloyd Leonard
 Wolff, Alfred
 Wurlitzer, Raimund Billing
 Yegen, Peter Trepp

Port Washington
Louisville, Ky.
La Crosse
Jefferson
Madison
Grand Rapids, Mich.
Racine
Janesville
Milwaukee
Ashland
Decorah, Iowa.
Milwaukee
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Indianapolis, Ind.
Madison
Monticello, Iowa
Wausau
Madison
Milwaukee
Boardman
West Chicago, Ill.
Tipton, Iowa
Madison
Fond du Lac
Evanston, Ill.
Madison
Rewey
Madison
Evansville
Janesville
Cincinnati, Ohio
Billings, Mont.

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Course in Chemistry

Andrews, Andrew Irving
 Arzberger, Cornelius Fred
 Beglinger, Harold Fred
 Brickbauer, Benjamin George
 Cheetham, Harold Cowan
 Chou, Ming-Heng
 Finner, Lucy Louise
 Flogans, William Albert
 Gooding, Ralph Urban
 Hackbert, Clarence Reinold
 Helfaer, Bertram
 Hoffman, Alice Emily
 Hogenson, George Harold
 Hoppert, Carl Arthur
 Humphrey, Edward Twining
 Jung, Frederic Theodore
 Kaul, Hazen Herbert

Oshkosh
Helenville
Oshkosh
Elkhart Lake
Milwaukee
Ningpo, China
Dodge
Chicago, Ill.
Fond du Lac
Poynelle
Milwaukee
Madison
Valders
Sheboygan
St. Catherine, Ont., Can.
Sheboygan
Waukesha

Lee, Tachong
 McCollum, Edgar De Bolt
 Maleckar, William Richard
 Melaas, Margaret Isabelle
 Nash, George Walter
 Nehrlich, Clara Amelia
 Newbury, Edwin Wilson
 Park, Benjamin Herbert
 Peterson, Otto Norman
 Roessler, Leslie Albert
 Schmidt, Emil Gustave
 Short, Robert Wright
 Wiese, Hilda Frieda
 Wiethaup, Roland Albert
 Young, John Henry

Ka Yin, China
Rice Lake
Marinette
Stoughton
Milwaukee
Sheboygan
Burlington
Fond du Lac
Madison
Jefferson
Osceola
Elkhart, Ind.
Madison
Milwaukee
Eau Claire

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Course in Journalism

Ball, Ruth Lucile
 Collins, Florence Elma
 Comstock, William Thurston
 Craneheld, Paul Frederic
 Davidson, Charles Mowbray
 Dopkins, Elmo Carlyle
 Farrington, Joseph Rider
 Fedde, Katherine Anne
 Herz, Robert Thal
 Horner, Emilie Elizabeth
 Laird, Nellie Marie
 Legler, Henry Maxson
 Lehrbas, Lloyd Alan
 McCoy, Bruce Riege
 Maw, Dora Elizabeth
 Obenauer, Victor Jackson, Jr.
 O'Meara, Walter Andrew
 Palmer, Russell Raymond
 Parrish, Philip Hammon
 Peck, Harold Brigham
 Pruett, Mary Elizabeth
 Sinclair, Norris Albert
 Smertenko, Johan Jacob
 Smith, Dorothy Paul
 Sperry, Frederick Lewis
 Sperry, Margaret Bernice
 Stromme, Ruth
 Thayer, Eugene Butler
 Towsley, Jean Lytle

Muncie, Ind.
Tipton, Iowa
Oconto
Madison
Boise, Idaho
River Falls
Honolulu, T. H.
Peotone, Ill.
Logansport, Ind.
Grand Rapids
Milford, Ill.
Chicago, Ill.
Pocatello, Idaho
Sparta
Madison
Kokomo, Ind.
Cloquet, Minn.
Oak Park, Ill.
Corvallis, Ore.
Berlin
Stoughton
Lorain, Ohio
Rochester, N. Y.
Madison
Oak Park, Ill.
Rochester, N. Y.
Madison
Wausau
Toledo, Ohio

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General Course

Alabeck, Bernard
 Browne, Helen Converse

Blue River
Waupaca

Carlson, George Nathaniel
 Cleveland, Washington Irving
 Lupton, Adelmā
 Marohn, Irma Elaine
 Martin, Finley Furman
 North, Martha Mary
 Notbohm, Lex William
 Rix, Doris Cornelia
 Vaughan, Francis Harold

Waukegan, Ill.
Kensington, Mo.
Hartford City, Ind.
Milwaukee
Crown Point, Ind.
Sheboygan
Dousman
Milbank, S. Dak.
Milwaukee

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Freshmen

Adams, Thomas Edward
 Anderson, Alex
 Anstey, Helen Belinda
 Arnold, Rupert Scranton
 Aronson, Harry J.
 Arpin, Cecile
 Atkinson, Margaret Mary
 Austin, Allen Sunday
 Bach, Clarence Edwin
 Bacon, Lee Fairchild
 Bagley, Burton Bogardus
 Baker, Dorothy Mae
 Baker, Finley
 Bakken, Henry Harrison
 Baldwin, Rodney Brown
 Barber, Dorothy M.
 Barney, Helen Agnes
 Barr, Wallace A.
 Barrett, Cecilia Winifred
 Barron, Erva Luverne
 Bartholf, Marjorie
 Barton, Alice Gwendolyn
 Bassett, Dorothy Jane
 Bates, Willard Herald
 Bauer, Alfred John
 Beal, Beatrice Elizabeth
 Beck, Howard Hubert
 Beckett, Alice
 Benedict, Marion Elias
 Berezniak, Dorothy
 Bergmann, Otto Theofeld
 Beyer, Clara Helen
 Bill, Edward Lyman
 Billau, Margaret Elizabeth
 Bitterman, Grace Vivian
 Bjornson, Gunhild Kathryn
 Blair, James
 Blaul, Sophie Poehler
 Blied, Edna W.
 Bloodgood, Francis Joseph

Madison
Oregon
Bedtown
Milwaukee
Milwaukee
Grand Rapids
Green Bay
Milwaukee
Milwaukee
Madison
Mason City, Iowa
Miles City, Mont.
Bismarek, N. Dak.
Blue Mounds
Hilliards, Ohio
Milwaukee
Elkhart, Ind.
Milwaukee
Edgerton
Madison
Glencoe, Ill.
Albany
Rock Island, Ill.
Wyocena
Cedarburg
Oneida, N. Y.
Green Bay
Hamilton, Ohio
Nellsville
Chicago, Ill.
Sparta
Madison
New Rochelle, N. Y.
Cedar Rapids, Iowa
Madison
La Moure, N. Dak.
Grand Rapids, Mich.
Burlington, Iowa
Madison
Milwaukee

Blount, John Gray
 Blum, George Louis, Jr.
 Bonnin, Chris Henry
 Borgelt, Edward Hubert
 Bornstein, Sadie
 Boutin, Dorothy
 Brackebusch, Agnes Adelheid
 Bradley, Melcena Vereeda
 Braunschweig, Philleda
 Breidablik, Anna
 Brennan, Elsie May
 Bridge, Dorothy Evelyn
 Briggs, Adelin Sumner
 Brown, Brice Burton
 Brown, Gladys Elsie
 Brown, Thomas Jasper
 Bruce, Violet Grace
 Bruehl, Joseph Andrew
 Brunner, Albert Norbert
 Buckmaster, Dean Albert
 Buell, Gelia Mary
 Bump, Franklin E., Jr.
 Bundy, Egbert Bird
 Burch, Helen Upton
 Burgy, Jacob Herbert
 Burnham, Constance Olds
 Burns, Robert
 Burrill, Phroso Mirick
 Candee, Elizabeth Cecelia
 Cannon, Sherman Elma Whipple
 Caradine, John Gerald
 Carley, Verna Adeline
 Carlson, Helen Ovidia
 Casey, James Matthew
 Chappel, Meda Augusta
 Chidsey, Charles Augustus, Jr.
 Childs, Margaret
 Clark, Dorothy Elizabeth
 Clarke, Harry Zacke
 Cleary, Helen Marie
 Clemens, Alta
 Clifton, Eleanor
 Cochems, Kenneth
 Coe, Orpha Maizie
 Coerper, Dorothy Magdalene
 Colby, Helen Maud
 Comstock, Grace
 Conklin, Katherine Mary
 Conover, Daphne Grace
 Converse, Mary
 Cook, Irene May
 Cook, Murray Joseph
 Cosgrove, Frances Elizabeth

Milwaukee
Eau Claire
Shawano
Milwaukee
Almond
Bayfield
Lake Mills
Sedalia, Mo.
Ft. Atkinson
Madison
Lancaster
Madison
Madison
Madison
Peoria, Ill.
Omaha, Nebr.
Madison
Menasha
Leopolis
Kenosha
Bozeman, Mont.
Wausau
Eau Claire
Madison
Monticello
Waupaca
Racine
St. Louis, Mo.
Milwaukee
Madison
Monroe
Appleton
La Salle, Ill.
Madison
Oregon
Detroit, Mich.
Madison
Madison
Janesville
Everett, Wash.
Lodi
Madison
St. Anthony, Idaho
Barron
Hartford
Madison
Oconto
Madison
Madison
Madison
Madison
Ashland, Ohio
Madison

Cottrell, Lois Marie
 Coulson, Lee
 Craig, Charles Wallace
 Craighill, Elenor Rutherford
 Craighill, Margaret D.
 Crawford, Robert Wood
 Cress, Cornelia Van Ness
 Crook, Dorothy Dee
 Crothers, Marjorie Dunlap
 Crowley, Kate Lucile
 Culver, William Sloan
 Cummings, Mary
 Cunningham, Thelma Sarah
 Curtin, Anna Elizabeth
 Cutler, Viola Alyse
 Dahlman, Oscar Conrad Earnest
 Dangel, Dorothy Louise
 Darling, Mamie Helen
 Davenport, Jarvis Daniel
 Davey, Allan Cecil
 Dean, Ruth Cecilia
 Desmond, Mae Elizabeth
 Dettman, Herbert William
 Devine, Mildred Kathryn
 Dick, Helen Mae
 Dickey, Alice Gertrude
 Dixon, Evalyn Elizabeth
 Dodge, Howard McLellan
 Donald, Delma Ellen
 Donaldson, Ruth Elizabeth
 Donkle, Venice Marion
 Dornbrook, Percy Fred
 Dresen, Leona Emma
 Drew, Iva Elizabeth
 Duecker, Hubert Carl
 Dunlop, Fannie Louise
 Durrie, Janet
 Edelman, Mary
 Ek, John
 Elles, Aline Elizabeth
 Elliott, James Rolland
 Emmerling, Hans Frederick
 Ende, Arthur
 Endres, Hugo John
 Engholm, Helen Patience Tinkham
 Englander, Joseph Arthur
 Ericksen, Edna Florence
 Evans, Dorothy Charlotte
 Evans, Edward Thompson
 Falk, Philip Hadley
 Feathers, Leonard Clark
 Felsher, Minnie
 Ferguson, Mary Ella

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 Cedarburg
 Kirkwood, Mo.
 Madison
 Boston, Mass.
 Frederic
 Columbus, N. Mex.
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 Willoughby, Ohio
 Arena
 Eau Claire
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 Sheboygan
 Reedsburg
 Lovejoy, Ill.
 Sturgis, S. Dak.
 Sheboygan
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 Woodstock, Ill.
 Richland Center
 Madison
 Philip, Miss.
 Racine
 Madison
 Valparaiso, Ind.
 Madison
 Webster City, Iowa
 Madison
 Menasha
 Prairie du Sac
 Prairie du Sac
 Kiel
 Madison
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 Sheridan, Wyo.
 Phillips
 Evansville, Ind.
 Apple River, Ill.
 Milwaukee
 Sheboygan
 La Crosse
 Madison
 Milwaukee
 Wittenberg
 Moline, Ill.
 La Crosse
 Lake Mills
 Troy, N. Y.
 Madison
 Madison

Fiedler, Donald John
 Fiedler, Ralph Oliver
 Fischer, Hilda Elizabeth
 Fish, Helen Isabel
 Fishburn, Katherine
 Flamme, Grant August
 Fletcher, Isabel Eleanor
 Florine, Frank Churchill
 Forsythe, Robert William
 Foster, Joseph O'Kane
 Frank, Louis Robert
 Freese, Anna Louise
 Frohbach, Harold Otto
 Fuller, Agnes Mattie
 Fuller, Willard Love
 Gafford, Eugene Joseph
 Gallagher, Esther Clara
 Garrity, Luella Marie
 Garst, Roswell
 Gausman, Avel Eleanore
 Gaveney, Stanleigh
 Gayton, Grace Abbey
 Gebhardt, Anna Laura
 Gerds, Huldah Hedwig
 Gerhard, Marie Justin
 Gerken, Florence Eva
 Gibbon, Elsie Florence
 Gibbs, Marietta
 Gill, Harold Arthur
 Glassner, Rose Ruth
 Glenn, Robert Ralph
 Glück, Elsie
 Good, Frances Mary
 Grams, Marie Helen
 Grant, Alexander Richardson
 Gratz, Esther Rosena
 Greco, Charles
 Greene, John Havens Dayton
 Gregory, Mary
 Grieve, Florence Delepleine
 Grover, Georgia Beachel
 Haberland, Erwin John
 Hahn, Agatha Helen
 Hahn, Rose Linz
 Haldeman, Lennox
 Hall, Dorcas Josephine
 Hall, Laurence Waterbury
 Halperin, Bessie
 Halperin, Harry
 Hamilton, Phyllis Brayton
 Hammel, Genevieve Marie
 Hanks, Carlos Cramer
 Hansen, Sigrid Alfreda

Mineral Point
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Ashland
La Crosse
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Madison
Chicago, Ill.
Delavan
Madison
Kenosha
Verona
Watertown
St. Louis, Mo.
Chicago, Ill.
Milwaukee
Madison
Madison
Madison
Madison
Two Rivers
Laurium, Mich.
Ashland

Hanson, Amanda Mathilda
 Harley, Kenneth Herman
 Harloff, Gladys Louise
 Harmon, Hubert Fish
 Harmon, John Claire
 Hart, Mae Evelyn
 Hartmeyer, Helen Ann Elizabeth
 Hastings, Minneta Annie Littlewood
 Hatfield, Hazel Mae
 Hathaway, Grace Esther
 Hawk, Helen Celia
 Hausmann, Eleanor Henrietta
 Hawthorne, Gladys Ruth
 Heilmann, Eleanor Barbara
 Helbing, Vera Anna
 Hendricks, Lela Mary
 Hendrickson, Norma Elvira
 Hersey, Ruth Boyce
 Herzfeld, Richard Phillip
 Hesnault, Walter Jack
 Hicks, Marion Adah
 Hill, Jessie Mae
 Himmler, Lowell Whitman
 Hinn, Helen Bertha
 Hinnners, Virginia Miller
 Hittner, Vernon James
 Iloffman, Arthur Louis
 Hoffman, Adele Myrtle Louise
 Hogan, Mary Isabel
 Hohmann, Richard Pittman
 Holcombe, Ray Edward
 Holland, Rebecca
 Holscher, Maud Marie
 Holway, Gordon Safford
 Horton, Frederic Arthur
 Horwitz, Lazarus Herman
 Householder, George Sergros
 Hubble, Helen Mary
 Husting, Nathaniel Juneau Brunduel
 Hyslop, Volney Butman
 Hyzer, Leland
 Ingalls, Louise Pebbles
 Irvine, Robert Kenneth
 Isaacs, Henry Garcia
 Jacobus, Garrett Leslie
 Jennings, David Harry
 Jewell, Ernest Lemon
 Jobse, Amy Clara
 Johnson, Donald Briggs
 Johnson, Jesse Johannes
 Johnson, John B., Jr.
 Johnson, Malcolm Francis
 Johnson, Mary Anastasia

Ashland
 Madison
 Madison
 Sparta
 Sparta
 Waunakee
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 Baraboo
 Madison
 Madison
 Monroe
 Tomah
 Watertown, S. Dak.
 Tomah
 Argyle
 Brooklyn
 Milwaukee
 Walnut Grove, Minn.
 Madison
 Kenosha
 Washington, D. C.
 Fennimore
 Milwaukee
 Seymour
 Madison
 Watertown
 Butte, Mont.
 Oak Park, Ill.
 Madison
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 Macfarland
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 Rockford, Ill.
 Sheboygan
 Chicago, Ill.
 Madison
 Kaukauna
 La Valle
 Janesville
 Oak Park, Ill.
 Manawa
 St. Louis, Mo.
 Wauwatosa
 Newcastle, Ind.
 Hillsboro
 Milwaukee
 Rockford, Ill.
 Wautoma
 Darien
 Grand Rapids
 Lemont, Ill.

Johnson, Ruth Ann
 Johnson, Ruth Ellsworth
 Johnston, Margaret
 Johnston, Maude Cyrene
 Johnstone, Mary Cecilia
 Jones, Russell Alger
 Jones, Vesta Norine
 Jorndt, Ruth
 Joyner, Louise Vivian
 Kaminski, Joanna Frances
 Kanouse, Georgia Bernadine
 Karst, Edward William
 Kearns, Edward Peter
 Kemp, Wilhemina Alice
 Kernan, Kathryn Elma
 Kerns, Milton Uriah
 Kerr, Dorothy Margaret
 Kerr, Florence Marie
 Kidder, Earl Elton
 Kiekhofer, Erna Lula
 Kiesler, Laura Shaw
 Kimball, Lucy Perry
 King, Charles Curtis
 Kinney, Clarence
 Kischel, Goldes
 Knight, Harry Waller
 Knipe, Merle Echo
 Knowlton, Mary Gertrude
 Koehn, Irma Therasa
 Koenig, Francesca
 Kragh, Herbert Erthol
 Kremers, Laura Ruth
 Kroening, Ada Beach
 Krueger, William Arthur
 Kucheman, Marguerite Anna
 Kupfer, Lillian Ethel
 Lamberson, Winifred Alida
 Landsberg, Elizabeth Wilhelmina
 Larrabee, Edward Conyers Payne
 Law, Robert Oswald, Jr.
 Lawton, Harry
 Lee, Margaret Irene
 Lerdahl, Nels Christian
 Levin, Tillie Cecile
 Lew, George Herman
 Lichtenwalner, Ray Peter
 Lindemann, Lawrence O.
 Loomer, Zelta Grace
 Loose, Kathryn Alice
 Loughlin, Edward Leo
 Lowth, Robert
 Luckey, Ruth Campbell
 Lund, Alf

Rye, Fla.
Madison
Cincinnati, Ohio
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Richland Center
Oak Park, Ill.
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Roswell, N. Mex.
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Pardeeville
Beloit
Madison
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Green Bay
Green Bay
Madison
Fond du Lac
Perryville, Mo.
Chicago, Ill.
Birmingham, Ala.
Colfax
Wausau
Madeira, Ohio
Cherokee, Iowa
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Sheboygan
Milwaukee
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Tomah
Bellevue, Iowa
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Whitehall
Erie, Pa.
Bellingham, Wash.
Chicago, Ill.
Burlington
Madison
De Forest
Wausau
Racine
Monroe
Viroqua
Delavan
Waukesha
Madison
Columbus
Madison
Eau Claire

Lund, Reuel Ithiel
 Lyons, Grace Ethel
 McBride, Elmer Martin
 McCandless, Stanley Russell
 McCollister, Elizabeth
 McCormick, George Boniface
 McCoy, Malcolm Clark
 McDougall, Helen Elizabeth
 McIntosh, Aileen
 McMahon, Dorothy
 McMeans, Margaret Collins
 McMullen, Nellie Marcella
 McNamee, Shurly Lawrence B.
 McNeil, Eileen Harrington
 Maas, Phyllis Sylvester
 Machlis, Clara
 Machlis, Samuel Arthur
 Mackay, Ralph Sutherland
 Margraff, Gertrude Bertha
 Markham, Margaret Cornelia
 Marling, Robert Newcomb
 Marsden, Wendell
 Marshall, Samuel
 Martin, Ruth Agnes Mary
 Mason, Rose Katherine
 Masten, Helen Adams
 Mathews, Murray Cornelius
 Mathison, Martin Clarence
 Maurer, Cindarella Priscilla
 Maurseth, Lars Hvern
 Meiselwitz, Henrietta Caroline
 Meister, Ruth Phyllis
 Melcher, Melvin William
 Meltzer, Edna Josephine
 Mercer, Donald Winter
 Meyer, Martin Emil
 Millard, Robert Dinsmore
 Miller, Maude
 Miller, Phillip
 Milligan, Margaret Eleanor
 Mills, Frederic Theo
 Mitchell, Florence Elizabeth
 Mochlman, William Frederick
 Mohme, Erwin Theodore
 Moore, Anne Evelyn
 Morgan, Lloyd Charles
 Muldowney, Fenton Richard
 Murphy, Elizabeth Hazel
 Murphy, Lillian Elizabeth
 Murphy, Roy Francis
 Murray, Agnes
 Musgrove, Robert Earl
 Nebel, Harold

Denmark
 Madison
 Milwaukee
 Davenport, Iowa
 Madison
 Waterloo
 Sparta
 Pocatello, Idaho
 Edgerton
 Lancaster
 Davenport, Iowa
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 Aniwa
 Milwaukee
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 Milwaukee
 New London
 Manitowoc
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 Fennimore
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 Madison
 Whitewater
 Kansas City, Mo.
 Ashland
 Winneconne
 Glenbeulah
 Madison
 Kiel
 Chicago, Ill.
 Horicon
 Madison
 Chicago, Ill.
 Sheboygan
 Antigo
 Cumberland
 Madison
 Pontiac, Mich.
 Nevada, Iowa
 Sun Prairie
 Madison
 Kewaskum
 Watertown
 Madison
 Highland
 Delavan
 Madison
 Manitowoc
 Madison
 Milwaukee
 Milwaukee

Nelson, Eunice
 Neprud, Lincoln
 Nerdrum, Ruth Alfreda
 Nichols, Lauretta Hessin
 Noer, Rebecca Olena
 Norton, Grace Elizabeth
 Noyes, Constance Pierrepont
 Nutter, Lucile Adelaide
 Nuzum, Marguerite Frances
 O'Hara, Clarence Martin
 Olds, Helen Brunette
 Oleson, Eleanor Marie
 Olson, Clara Mrytle
 O'Malley, James Edward
 Oppelt, Gertrude Josephine
 Osborn, Eighmy-bell
 Osborne, Robert Henry
 Osgood, Carroll Wilcox
 O'Shea, Stanley Daniel
 Ostlund, Elvira Otilia
 Overton, Orrin Van
 Owen, Allen Kenneth
 Paddock, John Munger
 Palmer, Joseph Fowler
 Parks, Isabelle Margaret
 Parsley, Mannie Nutt
 Parsons, Mary Rutherford
 Pelton, Harold Edwin Leslie
 Pentecost, Mildred May
 Perkins, Homer Eli
 Perlman, Tilly
 Petersen, Helen Green
 Peterson, Blanche
 Peterson, Ephraim Lucius
 Peterson, Leo Willis
 Petley, Ruth Alice
 Philipp, Cyrus Lucius
 Phillips, Wendell
 Philpott, Merrill Raymond
 Pickhardt, Edwin Louis
 Pilpel, Mildred Georgiana
 Pleck, Joseph Harold
 Porter, Autentia May
 Post, Leona Marie
 Pratt, Elizabeth Brereton
 Prentiss, Marion Sara
 Pringle, Edward Ogilvie
 Pringle, Katherine Edna
 Puestow, Karver Louis
 Quackenbush, Hilda Lorie
 Quarberg, Isabelle Emma
 Quinlan, Carroll Leander
 Quisling, Sverre

Edgerton
 Westby
 Milwaukee
 Marshalltown, Iowa
 Sloughton
 Marinette
 Kenwood, N. Y.
 Sac City, Iowa
 Madison
 Madison
 Albany, Ill.
 Rio
 Tomah
 Waunakee
 Ft. Wayne, Ind.
 Madison
 Madison
 Windsor
 Madison
 Butte, Mont.
 Beloit
 Milwaukee
 Milwaukee
 Buffalo, N. Y.
 Washington, D. C.
 Fort Worth, Texas
 Chicago, Ill.
 Middleton
 Elmhurst, Ill.
 Endeavor
 Madison
 Kenosha
 Princeton, Ill.
 Stockholm
 Granton
 Milwaukee
 Milwaukee
 Madison
 Menomonie
 St. Louis, Mo.
 New York, N. Y.
 Sturgeon Bay
 Oak Park, Ill.
 Edgerton
 Kansas City, Mo.
 Grand Rapids
 Pasadena, Cal.
 Astico
 Oshkosh
 Rock Island, Ill.
 Mondovi
 Antigo
 Madison

Ragatz, Lowell Joseph
 Ramsay, Samuel Watson
 Ramsett, Clarence
 Ramsey, Helen
 Rankin, Iva Lucille
 Raube, Herbert Albert
 Reeder, Charles West
 Renander, Arthur William
 Rice, Marguerite Adele
 Richardson, Marie Caroline
 Rietbrock, Fred Julius
 Riggs, Gladys Evelyn
 Roemer, Kate Pier
 Rohde, Berolina Theresa
 Rosenblum, Harry Maurice
 Rudy, Frances Eleanor
 Rushenberg, Marene Jennie
 Ryan, Frances Ethel
 Rydjord, John
 Salisbury, Jane Frances
 Salsman, Alice Louise
 Salter, Arthur McKinley
 Sarles, Agnes Bowden
 Schapiro, Sol
 Scheidenhelm, Alber Knauer
 Scherer, Florence Anna
 Schlicher, John Rudolph
 Schlotthauer, Gertrude Marie
 Schmitt, Francis Herman
 Schroeder, John Edward
 Schubert, Clarence Karl
 Schultz, Edwin William
 Schultz, Peter
 Schulz, Ella Myrtle
 Schumacher, Ethel Maude
 Scott, Ralph
 Scoular, Katherine Janet
 Scudder, Marjorie
 Sebor, William Joseph
 Settle, Ruth
 Seybold, Erwin George
 Seymour, Whitney North
 Sharp, Donald Ellsworth
 Shaw, Donald Lee
 Sheahan, Mary Brigetta
 Shurtleff, Dorothy
 Siebecker, Flora Josephine
 Simpson, Alexander Lewis
 Simpson, Marjorie Du Val
 Sinclair, Mildred Iantha
 Skolas, Christine Gertrude
 Sliwinski, John Alvin
 Smith, Hazel Dell

Madison
 Chicago, Ill.
 Viroqua
 Madison
 Pekin, Ill.
 Waupun
 Hays, Kans.
 Clayton
 Kewaunee
 Madison
 Milwaukee
 Cando, N. Dak.
 Milwaukee
 Estherville, Iowa
 Clinton, Ind.
 Madison
 Roberts
 Madison
 Webster, S. Dak.
 Sparta
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 Unity
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 Milwaukee
 Wilmette, Ill.
 Madison
 Terre Haute, Ind.
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 Wautoma
 Milwaukee
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 Beloit
 Harden, Mont.
 Superior, Nebr.
 Marinette
 Athens
 Martinsdale, Mont.
 Forest Junction
 Madison
 Corning, N. Y.
 Delavan
 Montello
 Manchester, N. H.
 Madison
 Shullsburg
 Chicago, Ill.
 Ladysmith
 Madison
 Oconomowoc
 Madison

Smith, Herbert Harold	<i>Milwaukee</i>
Smith, Mabel Gertrude	<i>Menomonee</i>
Smith, Mabel Mayhew	<i>Chicago, Ill.</i>
Smith, Ralph Lane Polk	<i>St. Paul, Minn.</i>
Smucker, Celeste Mabel	<i>Oak Park, Ill.</i>
Smuckler, Robert Henry	<i>Milwaukee</i>
Sommers, Leo Ernest	<i>Madison</i>
Spence, Gertrude Elizabeth	<i>Martins Ferry, Ohio</i>
Spohn, George Daniel	<i>Janesville</i>
Spoor, Edith Mildred	<i>Lyons</i>
Statz, Eleanor Carissa	<i>Madison</i>
Stearns, Dana Preston	<i>Mason City, Iowa</i>
Stearns, William Yets	<i>Detroit, Mich.</i>
Steensland, Marie Louise	<i>Madison</i>
Stensrud, Victor Rudolph	<i>Frederic</i>
Stern, William	<i>Kenosha</i>
Stewart, Duncan James	<i>Rockford, Ill.</i>
Stoffel, Selda Margaret	<i>Racine</i>
Storbraaten, John Herbert	<i>New Effington, S. Dak.</i>
Strehlow, Anna Katherine	<i>Madison</i>
Sullivan, Samuel John	<i>So. Madison</i>
Sumner, Willard Carlyle	<i>Fennimore</i>
Swanson, Cleary Neil	<i>Marinette</i>
Taylor, Alfred Hendricks	<i>Ottawa, Ill.</i>
Taylor, Sarah Margaret	<i>Ottawa, Ill.</i>
Teigen, Arthur Henry	<i>Prairie Farm</i>
Templin, Vera May	<i>Baraboo</i>
Thomas, Robert Kevil	<i>Chicago, Ill.</i>
Thompson, James Moore	<i>St. Croix Falls</i>
Thompson, Roy Winfield	<i>Madison</i>
Threinen, Bert Anthony	<i>Kenosha</i>
Tierney, Edward Frederick	<i>Portage</i>
Tipple, Erwin Russel	<i>Oregon</i>
Toepfer, Nora	<i>Madison</i>
Tormey, Marion Elizabeth	<i>Madison</i>
Trachte, Clarence Gilbert	<i>Watertown</i>
Truax, Lyle Lester	<i>Galesville</i>
Tuttle, Clifton Milton	<i>Madison</i>
Tyrrell, Richard Hanlon	<i>Lake Geneva</i>
Ulrich, Helen Ruth	<i>Neenah</i>
Urban, Ruth Marie	<i>Wauwatosa</i>
Van Arsdale, Maurice William	<i>Racine</i>
Van Dyke, Philip Samuel	<i>Kilbourne</i>
Van Vleck, John Hasbrouck	<i>Madison</i>
Vaughn, Maurine Ella	<i>Des Moines, Iowa</i>
Velten, Walter Charles	<i>Bloomer</i>
Vinje, Arthur Miller	<i>Madison</i>
Vinje, Ethel	<i>Madison</i>
Votteler, Gretchen Pauline	<i>Waukesha</i>
Vrooman, Gertrude Sherman	<i>Washington, D. C.</i>
Wagner, Margaret	<i>Freeport, Ill.</i>
Wallau, Ernst Carl	<i>West Bend</i>
Wallis, Winifred	<i>Milwaukee</i>

Wanner, Esther Juliette
 Ward, Evan
 Watson, Helen Adele
 Weeks, Herbert John
 Wegel, Esther Catherine
 Weimer, Elizabeth Ann
 Weinberg, Jacob Hyman
 Weiss, Helen Catherine
 Weld, Beatrice Louise
 Weldon, Charles William Temple
 Wellauer, Henry Conrad
 Westerfeld, Hattie Frone
 Weston, Frank Laurence
 Wheeler, Catherine Eleanor
 White, Lola Anna
 White, Paul Benjamin
 Wightman, George Verne
 Wiley, Robert LeRoy
 Willard, Helen Heitshu
 Williams, David Charles
 Williams, Stalham Leon
 Wilson, Ethel Edwina
 Wilson, Herbert Durand
 Winchell, Vira Frances
 Winskell, Alma Anne
 Wittenberg, Florence Bertha
 Wittwer, Gladys Marie
 Wolfe, Elizabeth Lamont
 Wolfe, John Calvin
 Wolff, Marie Borchardt
 Wollaeager, Gertrude Elizabeth
 Woodworth, Douglas Harmon
 Woodworth, Lona Harriet
 Wooll, Hildagarde Lucretia
 Wright, Hazel Embree
 Wright, Herbert Beach
 Young, Anna Lorena
 Young, Charlotte Cheney
 Zahorik, Edward John
 Zeigler, Alvin
 Zeitz, Edwin
 Zwicker, Michael Henry

Chicago, Ill.
Fort Atkinson
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Chilton
Fond du Lac
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Madison
Madison
South Bend, Ind.
Milwaukee
Wauwatosa
Madison
Mason City, Iowa
Wauwatosa
Winneconne
Omro
Madison
Cameron
Marshalltown, Iowa
Cambria
Chicago, Ill.
Chicago, Ill.
Chicago, Ill.
Madison
Benton
Chicago, Ill.
Madison
La Crosse
Madison
Madison
Milwaukee
Sparta
Park Ridge, Ill.
Madison
Webster Groves, Mo.
Milwaukee
Springville, Iowa
Monroe
Milwaukee
Athens, Tenn.
Brooklyn, N. Y.
Madison

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Course in Commerce

Abel, Edna Margaret
 Adams, Reuben Homer
 Alberg, Arthur Herman
 Amel, Mervin Franklin
 Andersen, Elizabeth Marie
 Anderson, Alfred Harold
 Arthur, Francis Churchill

Lewiston, Mont.
Kendallville, Ind.
Madison
Shawano
Madison
Coon Valley
Fort Dodge, Iowa

Aschenbrener, Willard George
 Austin, Abe Smith, Jr.
 Barnett, Maurice Edward, Jr.
 Baskerville, Henry Marwood
 Bettendorf, Arthur Joseph
 Bickel, Fred McIntyre
 Bieske, Michael
 Blair, Walter Borden
 Blodgett, Clifford Alvaro
 Breidster, Milford Albert
 Brennan, Leo Thomas
 Brown, Earl Don
 Buettell, Nathan Leonard
 Burner, Kenneth Hansen
 Callander, John Morgan, Jr.
 Carroll, Clark Joseph
 Chapman, Floyd De Loss
 Chase, Roland G.
 Chase, Ruluf Arthur
 Clark, William Arthur
 Cook, Jesse Kennedy
 Crane, Carroll
 Crary, Laurence Mallory
 Culbertson, Charles
 Cullen, Kenneth Arthur
 Currie, Earl William
 Dinkwitz, Willard Moses
 Dix, Arno Viol
 Dobbratz, Elvin Louis
 Donohue, Raymond Earl
 Doxtater, Jacob Harrison
 Drake, Chester Myrick
 Duncan, Francis Willard
 Dunne, Newman Leo
 Earle, William Watson
 Eaton, Harold Alexander
 Edwards, Leroy Eugene
 Edwards, Raymond Delos
 Eiler, William Henry
 Eisele, Edward Joseph
 Ellingson, Arvin Belford
 Esch, Hugo Edward
 Farrell, Carl William
 Fee, Archibald Hubert
 Feldman, Grant
 Fetter, Russell Marion
 Fiske, Earl Herbert
 Fitzgerald, Lloyd Eugene
 Flikkie, Henry John
 Frame, James Howard
 Frank, Jacob
 Friedmann, Ralph Theodore
 Froelich, Harold

*Park Falls
 Wauwatosa
 Neenah
 Watertown, S. Dak.
 Sublette, Ill.
 Racine
 Endeavor
 Plainfield
 River Falls
 Milwaukee
 Madison
 Madison
 Dubuque, Iowa
 South Bend, Ind.
 Des Moines, Iowa
 Watertown
 Dixon, Ill.
 La Crosse
 Madison
 Stoneville, S. Dak.
 Groton, S. Dak.
 Evansville
 Delavan
 Stanley
 Peshtigo
 La Crosse
 Marinette
 Port Washington
 Milwaukee
 Tipton, Iowa
 Oneida
 Austin, Texas
 Green Bay
 Cedarburg
 Tomah
 Shelbyna, Mo.
 Madison
 Madison
 Tipton, Iowa
 Madison
 Milan
 Manitowoc
 Sterling, Ill.
 Superior
 Mason City, Iowa
 Kendallville, Ind.
 New Richmond
 Antigo
 Viroqua
 Madison
 Pittsburgh, Pa.
 Milwaukee
 Milwaukee*

Fuller, Henry Chester
Galvin, John Lyman
Ganzlin, Bruno
Garling, Arthur Carl
Getschman, Walter Edward
Godfrey, Dudley James
Goethel, Carl
Goetsch, Arthur
Gbetz, Fred William
Grace, John Henry
Gross, Arthur Albert
Grout, Harold Main
Gullickson, William
Haessler, Dorothy Lina
Hammond, Loring Theodore
Harker, John William
Harrison, Kathleen
Hayden, John Ellsworth
Hayter, Harry Clifton
Healey, George William
Heffernan, Martin
Heissmann, Milton John
Helbing, Edgar Elmer
Held, Roland Riesen
Hensey, Irene Annette
Hickey, Clement Hugh
Hoffman, Ralph Max
Hook, Harmon Porter
Horn, Arnold Frank
Horner, William Spencer
Hornung, Charles Lester
Hornung, William
Horton, Ralph
Hubbell, Ernest Hamand
Hunting, Laura Updegraff
Jandorf, Carl Edwin
Joerndt, Clarence Venoah John
Johnson, Edwin Melvin
Johnson, Melvin Sylvester
Johnson, Norman Gustave
Jones, Mark Zera
Jones, Wesley Warren
Jordan, Stanislaus Stephen
Karow, Eugene William
Katzenstein, Henry Bonnus
Keeley, Lawrence Charles
Kellogg, Fred Conway
Kibbee, Howard Ryland
King, John Stuart
Kinzel, Lesley Kenneth
Knorr, Lincoln Dewey
Kuehn, Walter Louis
Laemie, Berthold

Whitewater
Collage Grove
Sauk City
Mayville
Kenosha
Wauwatosa
Eau Claire
Reedsburg
Stratford
Oak Park, Ill.
Milwaukee
Columbus
Eau Claire
Milwaukee
Wauwatosa
Shullsburg
Madison
Milwaukee
Shawano
Evansville, Ind.
Caryville
Watertown
Beaver Dam
Milwaukee
Fort Atkinson
Milwaukee
Madison
Oak Park, Ill.
Muskego
Grand Rapids, Mich.
Ottawa, Ill.
Ottawa, Ill.
Miles City, Mont.
Kansas City, Mo.
McGregor, Iowa
Grand Rapids, Mich.
Kenosha
La Crosse
Paskin
Wausau
Madison
Sun Prairie
Antigo
De Forest
Milwaukee
Mayville
Edgerton
Mitchell, S. Dak.
Glencoe, Ill.
Merrill
Kiel
Milwaukee
Marshfield

Lathrop, Ralph Waldo
 Lau, Harry Frederick
 Laun, Carl Henry
 Laun, Ferdinand Henry
 Lawson, Carl Philip
 Layden, Arthur Kendall
 Leinenkugel, Edward Jacob
 Leonhard, George Jacob, Jr.
 Lewis, Hugh Lord
 Lewis, Percy Frederick
 Lindsey, James Milton
 Locken, Carl I.
 Logan, Cedric Feldham
 Londergan, Edward Chrysoganius
 Lovell, Orren Blake
 Luetscher, Frederick Jacob
 Lunder, Orin John
 Lynch, Clayton David
 Lyons, Raymond David
 McCarthy, John Barton
 McDonald, Durward Lauree
 McDowell, Lloyd James
 McKenna, Eugene Joseph
 McKenzie, Basil
 McPherrin, John Weitz
 McRae, William Jennings
 Maisel, Lorenz Jacob
 Mann, Berthold Charles
 Meservey, Arthur Russell
 Meyer, Harvey Gustave
 Miller, Charles Dewey
 Miller, Elmer Oscar
 Montague, Theodore Giles
 Moore, Sidney
 Morgan, Fay Lillian
 Morrissey, Lewis William
 Mueller, Alphons R.
 Murphy, Alice Marie
 Muther, Charles William
 Myers, Howard Kenneth
 Nash, Richard Michael
 Nehrbass, Harry
 North, John Kenyon
 O'Brien Herbert James
 Olds, Russell Baldwin
 Olson, John Hjalmar
 Owen, Gordon
 Paine, Wendell Wyman
 Parker, Herbert Nichols
 Parr, Lester William
 Patterson, William Francis
 Pearson, Bertha Ingeborg
 Pearson, Ralph Jenkins

Wauzeka
 Cedarburg
 Kiel
 Wausaukee
 Clinton
 Baraboo
 Eau Claire
 Marshfield
 Antigo
 Milwaukee
 Boise, Idaho
 Aberdeen, S. Dak.
 South Milwaukee
 Marcus, Ia.
 Muscoda
 Madison
 Madison
 Pardeeville
 Lapeer, Mich.
 Milwaukee
 Burt, Iowa
 Waverly, Iowa
 Antigo
 Turtle Lake
 Des Moines, Iowa
 Rhinelander
 Madison
 Mayville
 Minot, N. Dak.
 West Allis
 Madison
 Milwaukee
 La Crosse
 Onalaska
 Madison
 Madison
 La Crosse
 Baraboo
 Oak Park, Ill.
 Polo, Ill.
 Madison
 Milwaukee
 Houston, Texas
 Milwaukee
 Charles City, Iowa
 Hurley
 Madison
 Milwaukee
 Dixon, Ill.
 Madison
 North Freedom
 Wausau
 Madison

Pease, Harlow
 Peters, Oswald Henry
 Petrie, Hazen Hill
 Pett, Alma Emille Johanna
 Pieh, Roy John
 Powers, Edward Wellington
 Quinn, Henry Albert, Jr.
 Ramsay, Floyd Allen
 Ramsey, Ronald
 Ray, Charles Harold
 Reese, Kenneth Keith
 Rewey, Robert Livingston
 Reynolds, Donald Wagener
 Roberts, De Witt Leland
 Rose, Austin T.
 Sadlier, Richard Edward
 Salzenstein, Harold
 Sanders, Edward Willard
 Schatzle, Henry
 Schenk, Edwin William
 Schenk, Willard
 Schmidt, Arno John
 Schowalter, Herbert Philip
 Schuette, John August
 Schumann, Harold Louis
 Schwartz, Charles Floyd
 Schwartz, Myron Edward
 Severance, Dean Carlisle
 Silverman, Edward
 Silverness, Emil Leonard
 Simpson, John Douglas
 Sinaiko, Isaac
 Sinaiko, Jacob
 Smith, Ethel Crandall
 Smith, Sanford Fred, Jr.
 Sode, Otillia Emma
 Spettel, Marcus
 Spurrier, Donald Parrish
 Squire, Staniford
 Stauffacher, Henry Eliasius
 Steele, Richard
 Stiles, Ralph Demeritt
 Sunderland, Paul
 Swift, John Dewey
 Swift, William Arthur
 Tandberg, Harry
 Teweles, Monroe Gilbert
 Theisen, George Dewey
 Thompson, Evan Gwynne
 Thwing, Elizabeth
 Toerne, Oscar von
 Trainor, Roy Daniel
 Turner, William Joseph

Wauwatosa
West Bend
Madison
Johnson Creek
Madison
Youngstown, Ohio
Council Bluffs, Iowa
Beloit
Madison
Milwaukee
Madison
Rewey
Sturgeon Bay
Chicago, Ill.
Canton, O.
Stanley
Peoria, Ill.
Detroit, Mich.
Delavan
Madison
Madison
Davenport, Iowa
Jackson
Manitowoc
Watertown
Sharon
Two Rivers
Milwaukee
Milwaukee
Mondovi
Minneapolis, Minn.
Madison
Madison
Green Bay
Edgerton
Evansville, Ind.
La Crosse
Whiting, Ind.
Chicago, Ill.
Monticello
Oak Park, Ill.
Lake Mills
Kansas City, Mo.
Darlington
Darlington
Chippewa Falls
Sturgeon Bay
Green Bay
Lake Mills
Toledo, O.
Madison
Madison
Port Washington

Upgren, Arthur Rheinholdt
 Van Auken, Paul Stanley
 Van Gent, Paul
 Verhulst, John
 Vits, Albert Leslie
 Vits, Henry William
 Walker, Harland Bert
 Wallis, Robert Shephard
 Ward, Alonzo La Rue
 Webb, Frank Myrle
 Weakesser, Florence Emma
 Werrbach, Archie John
 Westphal, Harry Leroy
 Whedon, Vyse Beckwith
 Wheeler, Horace Phillips
 White, William Jackson, Jr.
 Wilder, Frank Edward
 Williams, Lloyd H.
 Winskell, Joseph Alvin
 Wirth, John Palmer
 Wittenberg, Carl Theodore
 Wittenberg, John Frederick, Jr.
 Wolf, Lester Michael
 Wolfe, Seth August
 Wurth, Walter William
 Yauman, Charles Robert
 Young, Gavin William, Jr.
 Zander, Henry George, Jr.
 Zimmerman, Harry Francis
 Zulfer, Anthony George

River Falls
Des Moines, Iowa
Fish Creek
Sheboygan
Manitowoc
Manitowoc
Almond
Rochester
Aberdeen, S. Dak.
Belmont
Madison
Milwaukee
Preston, Iowa
Appleton
Beloit
Russellville, Ark.
Madison
Des Moines, Iowa
Benton
Cedarburg
Cedarburg
Cedarburg
Sheboygan
Madison
Madison
Columbus
Nenah
Chicago, Ill.
Neillsville
Chicago, Ill.

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Course in Chemistry

Archie, David Wait
 Beckman, Orville Charles
 Blonien, Andrew Bert
 Coc, Arthur William
 Hentzen, Erwin Albert
 Holt, Norman Herbert
 Kahlenberg, Herman Heald
 Kletzien, Hobart Henry
 Koch, John Ralph
 La Ganke, Nelson Paul
 Liebe, Henriette Christene
 Olsen, Hjalmer Leroy
 Phillips, George Dewey
 Rhapsstock, Carl Gordon
 Richter, Henry Wingfield
 Scott, Ian Cameron
 Segal, Isadore Harold
 Shapiro, Abraham
 Steinle, John Vernon

Marinette
Madison
Milwaukee
Horicon
Milwaukee
Cambridge
Madison
New Holstein
Janesville
East Cleveland, Ohio
Stoughton
Madison
Milwaukee
Plainfield
Milwaukee
Milwaukee
Park Falls
Superior
Madison

Taylor, Francis Nightingale
 Taylor, Henry Gordon
 Vong, Pao Ho

Byron
Madison
Shanghai, China

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Course in Journalism

Allie, Arthur Francis
 Beck, Nina Susannah
 Berger, Doris
 Booth, Robert Tunstall
 Breyley, Mildred Allegra
 Colean, Miles Lanier
 Cutting, Richard Dana
 Dotson, Craig York
 Draper, John Harold
 Dunn, Mame B. Griffin
 Edison, Alice Grace
 Erikson, Leonard
 Germer, Frederic Moore
 Gould, Randall Chase
 Greif, Marion Elizabeth
 Grossfeld, Julian Arthur
 Guernsey, Dorothy
 Hanson, Rolfe Hjelmar
 Hartung, Leatha Vesta
 Helfaer, Evan Philip
 Henry, Marcella
 Johnson, Hazel Estelle
 Johnson, Margaret Mabel
 Johnson, Roy Albin
 Kraemer, Elmore Andrew
 Kuehmsted, Irvin
 Lorenz, Ellen
 Ludlum, Louise Perkins
 McCaffery, Arthur Laurence
 McConnell, Ansley Bryan
 Mace, Aaron John
 Maloney, Gerald Clifford
 Meyers, Bernard Edward
 Moore, Ellen Olmstead
 Moore, Marian Eleanor
 Moorman, Lola Fae
 Orr, Robert Connell
 Quarberg, Lincoln Andrew
 Quinlan, Margaret Amelia
 Richards, Archer Card
 Scott, Owen LeGrand
 Shurtleff, Bernice Roe
 Stott, Vesta
 Whipple, Marcia
 Wolf, Hazel Zeta
 Zilmer, Bertram George

Two Rivers
Lebanon, Ind.
Milwaukee
Chevy Chase, Md.
Wadsworth, Ohio
Peoria, Ill.
Kalamazoo, Mich.
Sioux Falls, S. Dak.
Oak Park, Ill.
Fox Lake
Sun Prairie
Chicago, Ill.
Chicago, Ill.
Bozeman, Mont.
Joliet, Ill.
Chicago, Ill.
Chicago, Ill.
Stoughton
Two Rivers
Milwaukee
Dayton, Ohio
Superior
Great Falls, Mont.
Michigan City, Ind.
Rockfield
Sheboygan
Madison
Sioux City, Iowa
Madison
Darlington
Oshkosh
Ladysmith
Kenosha
Appleton
Madison
Muskegon, Mich.
Waukesha
Mondovi
Antigo
Sioux City, Iowa
Sioux Falls, S. Dak.
Wilmette, Ill.
Mason City, Iowa
Madison
Mt. Horeb
Monroe

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General Course

Amborn, Lewis William	<i>Bristol</i>
Apple, Addie A.	<i>Waterford</i>
Baumann, Anna Amalia	<i>Kiel</i>
Crump, Florence Fern	<i>Lake Mills</i>
Donovan, Emma Margaret	<i>Madison</i>
Duncan, Myron George	<i>Wausau</i>
Fitzgerald, William C.	<i>Fond du Lac</i>
Gaik, Eleanor Adelheid	<i>South Bend, Ind.</i>
Gomber, Frances Sutherland	<i>Brodhead</i>
Grodinsky, Julius	<i>Milwaukee</i>
Hopkins, Harley Johns	<i>Whitehall</i>
Johnson, Wilbur Myron	<i>Wausau</i>
Loper, Carlton Foster	<i>Oshkosh</i>
McCabe, Anna Marion	<i>Rock Island, Ill.</i>
Maxwell, Donald Reginald	<i>Madison</i>
Meyer, Baron De Hirsh	<i>Brillion</i>
Moody, Sidney Frederick	<i>Weyauwega</i>
O'Shea, Michael Vincent	<i>Madison</i>
Ritter, William Leonard	<i>Hartford City, Ind.</i>
Roddy, Rhea Goodson	<i>Forney, Texas</i>
Snyder, Helen Marion	<i>Milwaukee</i>
Spillum, Laila Alberta	<i>La Crosse</i>
Stark, Howard Bailey	<i>Milwaukee</i>
Walker, Dorothy	<i>Columbus</i>
Walton, C. Wesley	<i>Dubuque, Iowa</i>
Young, James Dudley	<i>Neeah</i>

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FOUR YEAR COURSE IN PHARMACY

Falstad, Clarence Henry	<i>Eau Claire</i>	Sophomore
Gunderson, Alf Helge	<i>La Crosse</i>	Freshman
Johnson, Jalme Bernard	<i>Eau Claire</i>	Sophomore
Kesten, Homer Davies	<i>Milwaukee</i>	Sophomore
Salentine, Joseph Henry	<i>Calhoun</i>	Senior
Skaar, Ragnhild Synnevo	<i>La Crosse</i>	Freshman
Whelan, Julia Priscilla	<i>Mondovi</i>	Sophomore

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TWO YEAR COURSE IN PHARMACY

Allen, George Buell	<i>Beloit</i>	Second Year
Anderson, Oscar Edward	<i>Taylor</i>	First Year
Arneson, Clifford Wilhelm	<i>Spring Valley</i>	First Year
Bacon, Franklin James	<i>New London</i>	First Year
Baker, Howard Holton	<i>Gary, Ind.</i>	First Year
Bergstein, Leonard	<i>Duluth, Minn.</i>	First Year
Boberg, Harriet Agnes	<i>Eau Claire</i>	Second Year
Bock, Harold Duke	<i>Gotham</i>	First Year
Boies, Lawrence Randall	<i>Centuria</i>	Second Year
Diehl, Phillip Morrill	<i>Mitchell, S. Dak.</i>	First Year
Dodge, Harold A.	<i>Darien</i>	Second Year

Doeringsfeld, Clara Lois	<i>Fennimore</i>	First Year
Druding, Rufus Roy	<i>Ellsworth</i>	First Year
Elliott, Alvah Charles	<i>Muscoda</i>	First Year
Everson, Carl Olaf	<i>Stoughton</i>	First Year
Gabler, Vern Elmer	<i>Highland</i>	Second Year
Gitzen, Joseph Adolph	<i>Port Washington</i>	First Year
Groffman, Harlan George	<i>Manitowoc</i>	First Year
Johnson, Mabel	<i>Ogdensburg</i>	First Year
Kuenzi, Ernest Gottfried	<i>Colgate</i>	First Year
La Crosse, Jonas Louis	<i>Madison</i>	First Year
Lanz, Arthur	<i>Monroe</i>	Second Year
Lewis, Roy E.	<i>Madison</i>	First Year
Mills, George Kellar	<i>Rice Lake</i>	First Year
Mills, William Kenneth	<i>Hazel Green</i>	First Year
Noel, Gustave Joseph	<i>Casco</i>	First Year
Olsen, Minnard Oliver	<i>Spring Valley</i>	First Year
Paull, Chester	<i>Ridgeway</i>	First Year
Paull, Harry	<i>Ridgeway</i>	First Year
Paynter, Charles Perry	<i>Minerai Point</i>	Second Year
Pugh, Clifford Luzern	<i>Richland Center</i>	Second Year
Randall, Walter Elzworth	<i>Fall Creek</i>	First Year
Rath, Charlotte Rose	<i>Almond</i>	First Year
Rognlien, Otto A.	<i>Strum</i>	First Year
Rupp, Claude Earl	<i>La Crosse</i>	Second Year
Staples, Irene Foster	<i>Osceola</i>	Second Year
Stiles, Helen Margaret	<i>Sturgeon Bay</i>	Second Year
Tousley, Henry Darius	<i>Spring Valley</i>	First Year
Vorlop, Hugo Joseph	<i>Reedsburg</i>	First Year
Winkelblech, Lida Luella	<i>Aaronsburg, Pa.</i>	First Year
Young, Harold Bradley	<i>Oconomowoc</i>	Second Year

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Adult Special Students

Bachman, Louise Catherine	<i>Madison</i>	Freshman
Birchler, Henry William	<i>Milwaukee</i>	Sophomore
Brandenburg, Catherine Sarles	<i>Madison</i>	Freshman
Brinton, Donald Adair	<i>Madison</i>	Freshman
Brockhausen, Herbert Henry	<i>Milwaukee</i>	Freshman
Brockhausen, William Emil	<i>Madison</i>	Junior
Brown, Ernest James	<i>Madison</i>	Sophomore
Burke, Catharine Genin	<i>Madison</i>	Freshman
Callander, William Forrest	<i>Madison</i>	Freshman
Clarke, Lena Lorena	<i>Cassville</i>	Freshman
Colignon, Lucie Bertrand	<i>Green Bay</i>	Freshman
Conley, Irene Grace	<i>Reville, S. Dak.</i>	Sophomore
Cooper, Flora Belle	<i>Baraboo</i>	Junior
Darnstaedt, Herman Lester	<i>Racine</i>	Freshman
De Pasquale, Homer	<i>Milwaukee</i>	Freshman
Duffy, Walter A.	<i>Moquah</i>	Freshman
Fagerstrom, Harriet	<i>Racine</i>	Freshman
Fishburn, Mabel Pearse	<i>Madison</i>	Freshman
Frederickson, Shirley Rosalind	<i>Madison</i>	Freshman

Fried, Lillian Deldee	<i>Fountain City</i>	Freshman
Goedecke, Walter Scott	<i>Ableman</i>	Sophomore
Green, Walter Elmer m	<i>Milwaukee</i>	Junior
Haake, William John	<i>Chicago, Ill.</i>	Sophomore
Hansen, Dora May	<i>Madison</i>	Freshman
Hanson, Louis m	<i>Marinette</i>	Junior
Hartwig, Elizabeth Adolphine	<i>Hartland</i>	Freshman
Hefner, Alma Bochert	<i>Milwaukee</i>	Freshman
Hesse, Lucie Sophie Catherine	<i>Madison</i>	Freshman
Hindman, Harry Hingston	<i>Madison</i>	Sophomore
Howell, Elsie Margaret	<i>Woodhull, Ill.</i>	Junior
Johnson, Austin Norman	<i>Madison</i>	Freshman
Johnson, Elmer Clarence	<i>Woodhull, Ill.</i>	Freshman
Koepp, Otto August	<i>Madison</i>	Sophomore
Kronquist, Emil Arthur	<i>Madison</i>	Junior
Landon, Elmer William	<i>Milwaukee</i>	Freshman
Linen, John Schuyler	<i>East Orange, N. J.</i>	Freshman
Liska, Victor I.	<i>Brunn, Austria</i>	Freshman
McCampbell, Mina Ruth	<i>Madison</i>	Freshman
McGilvary, Elizabeth Paton	<i>Madison</i>	Freshman
McMillen, Dorothy	<i>Albuquerque, N. M.</i>	Sophomore
Minor, Charles Samuel	<i>Belmont</i>	Sophomore
Moore, Mary Eliza	<i>Madison</i>	Freshman
Moore, Thomas Francis	<i>Watertown</i>	Freshman
Moran, Mary Rose	<i>Madison</i>	Sophomore
Murphy, Samuel Alfred m	<i>Madison</i>	Junior
Oberlander, Marie	<i>New York, N. Y.</i>	Sophomore
O'Laughlin, Mary Gertrude	<i>Madison</i>	Freshman
Oskamp, Alexander McLeod	<i>Wyoming, O.</i>	Sophomore
Parr, Olive Mary	<i>Madison</i>	Freshman
Paulson, Clara Olive	<i>Hollandale</i>	Sophomore
Peil, Francis William	<i>Racine</i>	Freshman
Perel, Rose	<i>Madison</i>	Senior
Pieh, William John	<i>Madison</i>	Freshman
Purtell, Edna Maie	<i>Madison</i>	Sophomore
Raasch, Ewald Carl	<i>Milwaukee</i>	Freshman
Ransley, Harry Condor	<i>Stanley</i>	Freshman
Rawlings, Charles Alfred	<i>Rochester, N. Y.</i>	Sophomore
Riha, Joseph Wencel	<i>Kewaunee</i>	Junior
Robin, Paul	<i>New York, N. Y.</i>	Freshman
Roemer, Caroline Hamilton	<i>Milwaukee</i>	Sophomore
Sammes, Ingeborg Marie	<i>Madison</i>	Freshman
Sapira, Ida Edith	<i>Milwaukee</i>	Junior
Schoen, Frank Martini	<i>Madison</i>	Sophomore
Schroeder, Alma Louise	<i>Madison</i>	Sophomore
Sinaiko, Marcella	<i>Madison</i>	Freshman
Sister Mary Jeanette Bodoh	<i>Fond du Lac</i>	Freshman
Solon, Ruth	<i>Chicago, Ill.</i>	Senior
Sommer, Fanny Elizabeth	<i>Madison</i>	Sophomore
Stehn, Florence Clarke	<i>Madison</i>	Freshman
Stein, Herman	<i>Madison</i>	Freshman
Stilp, Rolland	<i>Eau Claire</i>	Freshman
Strasser, William m	<i>Madison</i>	Senior

Summerville, Warren James	<i>Madison</i>	Freshman
Thomas, Jane Austin	<i>Cambridge, Mass.</i>	Sophomore
Town, Henry Galloway	<i>Madison</i>	Freshman
Wakeman, M. Lydia	<i>Madison</i>	Sophomore
Warner, Mildred Katherine	<i>Madison</i>	Freshman
White, Adeline	<i>Madison</i>	Freshman
Witts, Milford	<i>Madison</i>	Junior
Wittig, Clara Julia	<i>Milwaukee</i>	Freshman
		—80

Course in Commerce

Anderson, Arthur Lloyd	<i>Eau Claire</i>	Freshman
Bird, Mason Traill	<i>Wellesley Hills, Mass.</i>	Freshman
Dunham, Lewis Wills	<i>Versailles, Ohio</i>	Freshman
Edwards, Allan Aaron	<i>East Aurora, N. Y.</i>	Freshman
Fruetel, Sheldon William	<i>Winona, Minn.</i>	Sophomore
Hefner, Hasbrouck Hansen	<i>Milwaukee</i>	Freshman
Leviant, Abe	<i>Milwaukee</i>	Freshman
Mayer, Frederic Austedt	<i>Milwaukee</i>	Freshman
Parr, Fred, Jr.	<i>Madison</i>	Freshman
Ross, Maurice	<i>Milwaukee</i>	Junior
Rubert, William Frederick	<i>Madison</i>	Sophomore
Watters, John, Jr.	<i>Ravenna, Ohio</i>	Freshman
Weber, Phillip Thomas	<i>Racine</i>	Freshman
Zapf, Wallace George	<i>Batavia, N. Y.</i>	Freshman
		—14

Course in Chemistry

Hey, Clement	<i>Sterling, Ill.</i>	Sophomore
Town, George Galloway	<i>Madison</i>	Senior
		—2

Course in Journalism

Cowan, John Warren	<i>Waltham, Mass.</i>	Freshman
Fehrenbach, August John	<i>Madison</i>	Sophomore
Lefebvre, Anne Dorothy	<i>Ashland</i>	Freshman
Meredith, Harry Franklin	<i>Union Grove</i>	Freshman
Peterson, Carl Victor	<i>Washburn, N. Dak.</i>	Freshman
Weiss, David	<i>New York, N. Y.</i>	Sophomore
		—6

General Course

Cleary, Maurice Joseph	<i>Fond du Lac</i>	Freshman
		—1

Course in Pharmacy

Reif, Herman Peter	<i>Madison</i>	Senior
		—1

Schneider, Leona Annette t c	<i>Two Rivers</i>
Schoepf, Leo Lawrence	<i>Madison</i>
Schwalbe, Isabelle Sanderson t c	<i>Milwaukee</i>
Servatius, Florence Ruth Marie t c	<i>Menominee, Mich.</i>
Turner, Ruth t c	<i>Hebron, Ill.</i>
Zander, Edith Marie t c	<i>Two Rivers</i>

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Adult Specials

Four Year Course

Anderson, Anna Louise	<i>Madison</i>	Junior
Reindahl, Olive Selma	<i>Madison</i>	Freshman

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Supervisor's Course

Darrin, Josephine Nellie t c	<i>Chicago, Ill.</i>	Freshman
Hughes, Cora Catherine	<i>Madison</i>	Freshman
Jaquish, John Henry	<i>Madison</i>	Freshman
Lee, Lullie Karen t c	<i>Stoughton</i>	Freshman
Stark, Anna Lydia t c	<i>Madison</i>	Sophomore
Tovey, Minnie Blanche	<i>White Lake, S. Dak.</i>	Sophomore

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Unclassified

Anderson, Margaret	<i>Madison</i>
Ayer, Mary L.	<i>Verona</i>
Gilman, Flora Moseley	<i>Madison</i>
Huff, Charles John	<i>Portage</i>
James, Mary Ventura	<i>Madison</i>
King, Florence Gilmore	<i>Madison</i>
Mahre, Ronald Henry	<i>Amery</i>
Mowry, Jean Jamieson	<i>Madison</i>
Odenbrett, Marjorie	<i>Sheboygan</i>
Paltz, Marie A. E.	<i>Madison</i>
Purtell, Jessie M.	<i>Madison</i>
Rubado, Marie Hannah	<i>Madison</i>
Torgerson, Irma Bitney	<i>Lodi</i>
Wolley, Hilda Lydia	<i>Madison</i>

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MEDICAL SCHOOL

Second Year

Armen, George Krikor I s	<i>Racine</i>
Axley, Harold I s	<i>Cleveland</i>
Bachhuber, Carl Alvin I s	<i>Mayville</i>
Benton, Joseph Levi I s	<i>Richland Center</i>
Bleckwenn, William Jefferson I s	<i>Mendota</i>
Blor, Edwin Garfield I s	<i>Nashotah</i>

Bogart, Franklin Blevins, B. S. g
 Bond, Harry William l s
 Burns, Robert Emmett l s
 Campbell, Meredith Fairfax, B. S. g
 Farisy, Arthur Thomas, B. S.
 Feinberg, Samuel Maurice l s
 Finnegan, Charles Robert, B. A. g
 Fischer, Frederick R. l s
 Gibson, Charles Archie l s
 Hall, Earl Hopkins l s
 Hannon, Leo John l s
 Helmes, Lloyd Oscar l s
 Hodges, Fred Jenner l s
 Hyslop, Robert James l s
 Jackson, Arnold Stevens, B. A.
 Kehl, Sylvester Carl l s
 Kiley, William Earl l s
 Lake, Thomas Owens l s
 McCoy, Leslie Layton l s
 Marsh, Harry Gilmore l s
 Moll, Arthur Mackenzie l s
 Nelson, Wilford Merriam l s
 Olson, Henry John l s
 Phillips, Harold Edward l s
 Piggins, Ralph Sproule, B. A., g
 Rainey, Edward Carlyle l s
 Reichert, John Lester l s
 Richdorf, Lawrence Francis l s
 Roantree, Robert Peter l s
 Ryan, Mark Edward l s
 Shearer, Harry Arthur l s
 Stang, Hartwick M., B. S.
 Starry, Leo Joseph l s
 Strasser, William l s
 Swarthout, Edyth Claire, B. A., g
 Taylor, Joseph Vincent, B. S., g
 Truitt, John William l s
 Tupper, Warren Ernest l s
 Van Liere, Edward Jerald, B. A., g
 Wahle, George Henry, B. A., g
 Weiner, Morris, l s
 Welke, Ernest Gottlieb l s
 Weller, Charles Grafton l s
 Westgate, Clyde James l s
 Wilde, Edwin l s
 Wooll, Gerald Kelley l s
 Zellmer, Carl Edward l s

Chattanooga, Tenn.
Wheeling, W. Va.
Madison
Madison
Franklin, Minn.
Watertown
Lavalle
Lancaster
Madison
Oconto
Sturgeon Bay
St. Paul, Minn.
Madison
Madison
Madison
Byron, Ill.
Oshkosh
Pittsville
Waunakee
Kenton, Mich.
Madison
Beloit
Madison
Milwaukee
Madison
West Bend
Maribel
Parker, S. Dak.
Oconomowoc
Edgerton
Eau Claire
Madison
Madison
La Crosse
Marple, Nebr.
Naperville, Ill.
Cameron, Idaho
Bristol
Marshfield
Milwaukee
Fall Creek
Fond du Lac
Cadott
Milwaukee
Madison
Antigo

First Year

Aylward, Thomas James, Jr. l s
 Bachhuber, Leo John, M. S. g
 Bell, Donald Chesbro l s

Green Bay
Mayville
Madison

Borsack, Karl Kasper, B. A. g	<i>Fond du Lac</i>
Boynton, Ruth Evelyn l s	<i>La Crosse</i>
Brennan, Joseph Patrick l s	<i>Butte, Mont.</i>
Cantwell, Roger Clifton l s	<i>Shawano</i>
Cook, Benjamin Franklyn B. S.	<i>Compton, Ill.</i>
Coon, Harold Macomber l s	<i>Stevens Point</i>
Diederich, Otto Peter l s	<i>Madison</i>
Driver, Camilles Ogden l s	<i>Racine</i>
Evans, James Ambrose l s	<i>La Crosse</i>
Eversoll, Norton John l s	<i>Cassville</i>
Fauerbach, Louis, Jr. l s	<i>Madison</i>
Felsner, Hannah l s	<i>Madison</i>
Gates, John Ferdinand G. l s	<i>Racine</i>
Geibel, Carl Diedrich, B. S.	<i>Madison</i>
Gilman, Robert Louis l s	<i>Oshkosh</i>
Green, Walter Elmer l s	<i>Milwaukee</i>
Gundersen, Gunnar l s	<i>La Crosse</i>
Gundersen, Sigurd Bjarne l s	<i>La Crosse</i>
Guttmann, Lyd Paul l s	<i>Kellnersville</i>
Hanson, Louis l s	<i>Marinette</i>
Hefty, Paul Leo l s	<i>New Glarus</i>
Holt, Harriette Grace, M. A.	<i>Madison</i>
Houck, Knut Koegh l s	<i>La Crosse</i>
Hunt, William Edwin, B. S. g	<i>Chuchow, China</i>
Irwin, George Howard l s	<i>Lodi</i>
Jacobson, Roland Arthur l s	<i>Billings, Mont.</i>
Janney, Francis Rush l s	<i>Richland Center</i>
Kasten, Harry Edward l s	<i>Juneau</i>
Kevin, Paul Robert l s	<i>La Crosse</i>
Khanlian, Parsyl Benjamin l s	<i>Madison</i>
Kinsman, Francis Cyrenus l s	<i>Manawa</i>
Knauer, Sophia Adeline l s	<i>Brooklyn, N. Y.</i>
Koelsch, William Alfred l s	<i>Boise, Idaho</i>
Kriz, Rose Alice l s	<i>Milwaukee</i>
Lakoff, Charles B. l s	<i>Chicago, Ill.</i>
Langjahr, Arno Robert l s	<i>Plymouth</i>
Livingston, Edward Meakin l s	<i>Madison</i>
Loomis, John Lawrence l s	<i>Madison</i>
McColl, William Fraser l s	<i>Roberts</i>
McCradie, Robert Drinnan, B. A.	<i>Grandin, N. Dak.</i>
MacNaughton, Leslie, B. S. g	<i>Argyle, N. Y.</i>
Mackedon, Leo William l s	<i>Milwaukee</i>
Malone, Julian Yerkes, B. A. g	<i>Ripon</i>
Miller, Glenn Henry l s	<i>Omaha, Neb.</i>
Mills, James Stewart l s	<i>Janesville</i>
Mueller, Gilbert Frederick Charles l s	<i>Milwaukee</i>
Mullen, Bernard Parker l s	<i>Sturgeon Bay</i>
Murphy, Samuel Alfred l s	<i>Madison</i>
Muskat, Irving Isidor l s	<i>Milwaukee</i>
Odén, Constantin Luther Ambrosius l s	<i>Belvidere, Ill.</i>
Peterman, Mynie Gustav l s	<i>Merrill</i>
Petersen, Arthur S. J. l s	<i>Racine</i>
Pink, John James l s	<i>Oconomowoc</i>

Ratty, Frank John l s
 Ruehl, Wilbur Herman l s
 Saunders, Otis Warren l s
 Schmitz, Herbert Walter l s
 Searle, Carl Carpenter B. S.
 Seids, James Vane l s
 Sevringhaus, Elmer Louis, B. A. g
 Simonds, Paul William l s
 Simpson, Edward Eber, Jr. l s
 Stack, Sylvester Stephen l s
 Steckbauer, Joseph Whittier l s
 Stephan, Carl Thompson l s
 Stuessy, Sylvia Gertrude, B. S.
 Swendson, James Jay l s
 Te Linde, Richard Wesley l s
 Van Den Berg, William John l s
 Vanderbie, Roscoe l s
 Vissman, Dorothy B., B. A. g
 Watson, Allen Smith l s
 White, Marcus Dee l s
 Williams, John Webster l s
 Youmans, Henry Augustus l s
 Zillmer, Helen Jane, B. A.

Laona
Beaver Dam
Oconto Falls
Manitowoc
Topeka, Kans.
Moline, Ill.
Madison
Milwaukee
Oshkosh
Milwaukee
Oshkosh
Chicago, Ill.
Madison
Amherst
Waupun
Madison
Platteville
Louisville, Ky.
Madison
Madison
Milwaukee
Mukwonago
Milwaukee

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COURSE IN PUBLIC HEALTH

Weber, Henry Charles g

Milwaukee

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COLLEGE OF ENGINEERING

Seniors

Abel, Charles Fred
 Affleck, Gregor Sidney
 Akenhead, James Earl
 Almon, Grover Cleveland
 Ashenbrenner, Rudolph Alois
 Babush, Joseph Samuel
 Raebler, Harold Zach
 Blodgett, Charles Wallace
 Bond, Aubrey H.
 Bostwick, George Lawrence
 Brandt, Ellis Rolland
 Brown, Herbert Henry
 Bruce, Warren Richardson
 Buck, Howard
 Carlson, Thorwald Alexander
 Case, Percival Fuller

Colby
Muscoda
Sparta
Weyauwega
Stratford
Milwaukee
Bangor
Madison
Eugene, Ore.
Eau Claire
Edgerton
Milwaukee
Boise, Idaho
Eau Claire
East Helena, Mont.
Racine

M. E.
 Ch. E.
 E. E.
 M. E.
 E. E.
 M. E.
 E. F.
 C. E.
 C. E.
 E. E.
 M. E.
 C. E.
 M. F.
 C. E.
 Ch. E.
 M. E.

Casey, Thomas Bernard	<i>Chicago, Ill.</i>	C. E.
Clausing, Benjamin John	<i>Grafton</i>	M. E.
Cooper, Clarence Edward	<i>Ashland</i>	Ch. E.
Cotter, Chester	<i>Madison</i>	M. E.
Davis, Roy Harold	<i>Madison</i>	C. E.
Dehler, Rudolph Walter	<i>Helena, Mont.</i>	E. E.
Dodge, Chester Carlton	<i>Devils Lake, N. Dak.</i>	E. E.
Eby, Samuel Hilary	<i>Milwaukee</i>	C. E.
Eichhorn, Harry Louis	<i>La Crosse</i>	M. E.
Ellison, Elwood Charles	<i>Fond du Lac</i>	E. E.
Engelke, Leroy Jerome	<i>Ashland</i>	E. E.
Evans, Wilfred	<i>Madison</i>	C. E.
Fanta, Erwin Krainik	<i>Manitowoc</i>	M. E.
Farley, John Leverett	<i>River Falls</i>	E. E.
Farrell, James Howard	<i>Madison</i>	Ch. E.
Filtzer, Robert Louis	<i>Milwaukee</i>	C. E.
Fleckenstein, Clemens Thomas	<i>Marshfield</i>	Ch. E.
Foeste, Arthur Bruno	<i>Sheboygan</i>	E. E.
Fowler, Dwight Smith	<i>Fond du Lac</i>	C. E.
Gefke, Jerome Henry	<i>Windsor</i>	E. E.
Gelsse, John Harlin	<i>Fond du Lac</i>	M. E.
Gill, Terence Alister	<i>Chicago, Ill.</i>	Ch. E.
Gloger, William Hugo	<i>Watertown</i>	C. E.
Gockel, Arthur Philip	<i>Cleveland, Ohio</i>	Ch. E.
Goldammer, Charles James	<i>Elkhart Lake</i>	E. E.
Gould, Edwin Fish	<i>Kansas City, Mo.</i>	C. E.
Gould, Stephen Grover, Jr.	<i>Kansas City, Mo.</i>	C. E.
Gower, Arthur William	<i>Chippewa Falls</i>	E. E.
Grant, Eugene Lodewick	<i>Chicago, Ill.</i>	C. E.
Grant, Ralph Anderson	<i>Milwaukee</i>	M. E.
Gregson, William Fuller	<i>Chicago, Ill.</i>	M. E.
Gribble, Stephen Charles	<i>Linden</i>	Ch. E.
Grimm, John Edward, Jr.	<i>Dayton, Ohio</i>	E. E.
Grubb, Walter Frank	<i>Stanley</i>	C. E.
Hagen, Oscar Edwin	<i>Stoughton</i>	M. E.
Hallock, Neil Carey	<i>Taylorville, Ill.</i>	C. E.
Hartung, Raymond Clarence	<i>Appleton</i>	E. E.
Hay, Donald Leith	<i>Stevens Point</i>	M. E.
Helmle, William Clarence	<i>Oak Park, Ill.</i>	Ch. E.
Henderson, Burnie Oliver	<i>Eau Claire</i>	C. E.
Henkel, George John, Jr.	<i>Milwaukee</i>	C. E.
Henry, Archibald Edgar	<i>Jefferson</i>	E. E.
Hill, Edgar Rice	<i>Chicago, Ill.</i>	M. E.
Hilton, Earl	<i>Chippewa Falls</i>	M. E.
Holmes, Charles Arthur	<i>Trempealeau</i>	E. E.
Hoppe, Alfred George	<i>Milwaukee</i>	M. E.
Houghland, Glen Sanford	<i>Madison</i>	Ch. E.
Jehle, Carl Winterfield	<i>Elgin, Ill.</i>	Ch. E.
Jenkins, James Wade	<i>Grand Rapids</i>	E. E.
Jewett, Clarence Gardner	<i>Plymouth</i>	E. E.
Johnson, Gordon Gosmann	<i>Amherst</i>	M. E.
Johnson, Robert Colton	<i>Madison</i>	C. E.
Johnson, William Spencer	<i>Beloit</i>	C. E.

Jones, Victor Hugo	<i>Mankato, Minn.</i>	E. E.
Kauffman, Clark Emory	<i>Chicago, Ill.</i>	M. E.
Kelty, Asher Esaias	<i>Rice Lake</i>	M. E.
Kenney, Edward Leander	<i>Elkhorn</i>	E. E.
Kitzman, Walter Leslie	<i>Eau Claire</i>	E. E.
Knocke, Louis Thielemann	<i>Waukesha</i>	M. E.
Knott, Richard Francis, Jr.	<i>Marseilles, Ill.</i>	M. E.
Kreuz, Louis George	<i>Madison</i>	Ch. E.
Kurtz, Edwin Bernard	<i>Cedarburg</i>	E. E.
Kurz, Louis David	<i>Appleton</i>	E. E.
Lane, Richard Kelvin	<i>Dodgeville</i>	M. E.
Lawson, Stuart Condit	<i>East Orange, N. J.</i>	Min. E.
Ludden, Homer Jameson	<i>Mineral Point</i>	E. E.
McHugh, Keith Stratton	<i>Madison</i>	Ch. E.
Mackey, Walter Curriden	<i>Madison</i>	Ch. E.
Margenau, Milo Louis	<i>Ashland</i>	E. E.
Martin, Byron Harold	<i>Delavan</i>	E. E.
Mendelsohn, Isador William	<i>Madison</i>	C. E.
Mielenz, Harold Frederick	<i>Milwaukee</i>	C. E.
Miller, Edmund	<i>Milwaukee</i>	Ch. E.
Nelson, Leslie Vernon	<i>Duluth, Minn.</i>	E. E.
Nethercut, Donald Warren	<i>Wauwatosa</i>	E. E.
Newton, Louis Christie	<i>Superior</i>	M. E.
Norris, Charles Brazer	<i>Milwaukee</i>	M. E.
Norton, Paul Thornley, Jr.	<i>Madison</i>	E. E.
Oakey, Warren	<i>Madison</i>	C. E.
Oestreich, Carl Ralph	<i>Milwaukee</i>	C. E.
Ogden, Dana Presley	<i>Madison</i>	E. E.
Pamperin, Arnold Trudell	<i>Oconto</i>	E. E.
Paul, Parry Haines	<i>Moorestown, N. J.</i>	M. E.
Pederson, John Peter	<i>Tunnel City</i>	M. E.
Pinney, Arthur Joseph	<i>West De Pere</i>	E. E.
Poe, Charles Roy	<i>Madison</i>	E. E.
Porter, Raymond Edwin	<i>Milwaukee</i>	M. E.
Powers, Martin Aloysius	<i>Fond du Lac</i>	Ch. E.
Pritchard, Owen John	<i>Fond du Lac</i>	Ch. E.
Ramsey, Ralph Edwin	<i>Beloit</i>	Ch. E.
Rau, Charles Alexander	<i>Madison</i>	E. E.
Reinhardt, Joseph Albert	<i>Madison</i>	Ch. E.
ReQua, Frederick Livingston	<i>Chicago, Ill.</i>	E. E.
Richardson, Glenn Carrol	<i>Milwaukee</i>	M. E.
Roberts, Morgan Evan	<i>Superior</i>	Min. E.
Roddewig, Gilbert Ferdinand	<i>Davenport, Iowa</i>	M. E.
Schubring, Albert Howard	<i>South Milwaukee</i>	E. E.
Schustedt, Frederick Nathaniel	<i>Madison</i>	C. E.
Scott, Allison Fendall Hannay	<i>Washington, D. C.</i>	E. E.
Shuffelbarger, Frank David	<i>Albuquerque, N. M.</i>	C. E.
Sinnen, Fred Emil	<i>Racine</i>	E. E.
Skirm, Joseph Gaskill	<i>Madison</i>	Min. E.
Suhm, Clarence Falk	<i>Milwaukee</i>	Ch. E.
Sweet, Howard Elliott	<i>Des Moines, Iowa</i>	Ch. E.
Truran, Walter Weatherby	<i>Pierre, S. Dak.</i>	E. E.
Tyrrell, Donald William	<i>Lake Geneva</i>	Ch. E.

Utegaard, Thomas	<i>Eau Claire</i>	C. E.
Van Patten, Everett Hoxie, Jr.	<i>Evansville</i>	M. E.
Vigneron, Eugene Morgan	<i>Chicago, Ill.</i>	E. E.
Vorlop, Edward William	<i>Reedsburg</i>	E. E.
Wadsworth, Randolph Lincoln	<i>Fl. Thomas, Ky.</i>	M. E.
Wahle, Walter Edwin	<i>Davenport, Iowa</i>	Ch. E.
*Weaver, Warren	<i>Madison</i>	C. E.
Webb, Walter Ray	<i>Sioux City, Ia.</i>	E. E.
Whipple, Newton Dean	<i>Waukegan, Ill.</i>	Ch. E.
Wolverton, Fred Melville	<i>Oshkosh</i>	Min. E.
Wood, John Morgan	<i>Albany</i>	M. E.
Wood, Raymond	<i>Waupun</i>	E. E.
Wyatt, Ralph Moore	<i>Fond du Lac</i>	E. E.

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Juniors

Anderson, Edward	<i>Racine</i>	M. E.
Andrews, Arthur Martin	<i>Baraboo</i>	Ch. E.
Avery, Herbert Laflin	<i>Shreveport, La.</i>	E. E.
Axtell, Wayne Osman	<i>Rochester</i>	C. E.
Balch, Cleon Faville	<i>Milwaukee</i>	E. E.
Baxter, Robert Addison	<i>Kansas City, Mo.</i>	Ch. E.
Bendfelt, Herbert Albert	<i>Chicago, Ill.</i>	E. E.
Bennett, Joseph Gardner	<i>Madison</i>	C. E.
Brock, Harold William	<i>Madison</i>	E. E.
Brown, Hugh Farrington J.	<i>St. Louis, Mo.</i>	C. E.
Brown, Stacy Lewis	<i>Beloit</i>	Ch. E.
Buchholtz, Arthur Otto Frederick	<i>Madison</i>	M. E.
Burzynski, Ladislaus Edward	<i>Milwaukee</i>	M. E.
Buzzell, Harold Winfield	<i>Delavan</i>	E. E.
Call, Lloyd Lenard	<i>Marshall</i>	E. E.
Camlin, William John	<i>Madison</i>	C. E.
Cole, Everett Leland	<i>Madison</i>	E. E.
Collar, George Creighton	<i>Phillips</i>	E. E.
Collins, Clark Smith	<i>Chicago, Ill.</i>	E. E.
Conaty, Bernard Martin	<i>Whitewater</i>	C. E.
Conley, Brooks Lawson	<i>Madison</i>	E. E.
Connolly, John Mark	<i>Milwaukee</i>	E. E.
Dennis, Charles Edwin, Jr.	<i>Baltimore, Md.</i>	C. E.
Donaldson, Chase	<i>Washington, D. C.</i>	E. E.
Drake, Ronald Irwin	<i>Mendota</i>	Ch. E.
Durgin, Trueworthy Orin David	<i>Racine</i>	Ch. E.
Fredericksen, Arthur Frederick	<i>Milwaukee</i>	M. E.
Gould, Sydney W.	<i>Canton, Ohio</i>	Ch. E.
Grams, Raymond Carl	<i>La Crosse</i>	E. E.
Gray, Daniel Charles	<i>Lorain, Ohio</i>	Ch. E.
Gumprecht, Henry Herman	<i>Rice Lake</i>	C. E.
Hansen, Waldo G.	<i>Beloit</i>	M. E.
Hanson, John Albert	<i>Wausau</i>	Ch. E.
Hanson, Malcolm Parker	<i>Milwaukee</i>	M. E.
Haubrich, Alfred Frederick	<i>Kenosha</i>	M. E.

*Scholar in Applied Mechanics 1916-17.

Hayden, Carl Frederick	<i>Milwaukee</i>	Ch. E.
Heintzen, Harry Richard	<i>Milwaukee</i>	E. E.
Hirshheimer, Harry West	<i>La Crosse</i>	M. E.
Holling, Harold Herman	<i>Plymouth</i>	M. E.
Hosler, Harold John	<i>Reedsburg</i>	C. E.
Huntzicker, Paul	<i>Greenwood</i>	C. E.
Hussissian, Khoren Leon	<i>Madison</i>	Min. E.
Jackson, George Stephenson	<i>Depere</i>	E. E.
Johnson, Russell Shults	<i>Milwaukee</i>	Ch. E.
Kaiser, Frank Andrew	<i>Milwaukee</i>	C. E.
Kavelage, Clem	<i>Milwaukee</i>	E. E.
Kielsmeier, Edward Henry	<i>Milwaukee</i>	Ch. E.
Kirch, Louis Adolf	<i>Mazomanie</i>	C. E.
Kleimenhagen, Karl Christian	<i>Kilbourn</i>	Ch. E.
Klemme, Glenn Harmon	<i>Belmond, Iowa</i>	C. E.
Kottler, Carl Frederic	<i>Milwaukee</i>	E. E.
Lange, Herbel Arthur	<i>Beloit</i>	M. E.
Liang, Wen Paul	<i>Hong Kong, China</i>	E. E.
Lindow, Rudolph Frederick	<i>Elkhorn</i>	E. E.
Linvog, Chresstie Ole	<i>Seattle, Wash.</i>	E. E.
Lord, Herbert Overton	<i>Oconto</i>	C. E.
McMullen, Cleve A.	<i>Dodgeville</i>	E. E.
Mackowski, John Edward	<i>Princeton</i>	E. E.
Mansfield, Robert Dustin	<i>Williston, N. Dak.</i>	M. E.
Mead, Harold Washburn	<i>Madison</i>	C. E.
Meiselwitz, Adolph William	<i>Kiel</i>	C. E.
Meyers, Paul Duncan	<i>Milwaukee</i>	Ch. E.
Miller, Ivan Chesbrough	<i>Madison</i>	Ch. E.
Miller, Raymond	<i>Milwaukee</i>	M. E.
Moore, George Thomas	<i>Madison</i>	M. E.
Morse, Ernest Benedict	<i>Appleton</i>	E. E.
Nachtrab, Lawrence John	<i>Oshkosh</i>	C. E.
Nash, Lucius Byron	<i>Eau Claire</i>	E. E.
Nathan, Walter Solomon	<i>Milwaukee</i>	E. E.
Negley, William Henry	<i>Dayton, Ohio</i>	Ch. E.
Newton, Jay Earl	<i>Ft. Atkinson</i>	E. E.
Nielsen, Arthur Charles	<i>Berwyn, Ill.</i>	E. E.
Olson, Victor Axel	<i>Marinette</i>	Ch. E.
Owen, Halsey Franklin	<i>Milwaukee</i>	M. E.
Peachy, James Alfred	<i>Burnett</i>	M. E.
Pergande, Arthur George	<i>Cedarburg</i>	E. E.
Peterson, Arthur Frederick	<i>Ironwood, Mich.</i>	Min. E.
Pottinger, Clarence Albert	<i>Ft. Atkinson</i>	E. E.
Rasmussen, John Peter	<i>Oshkosh</i>	C. E.
Roberts, James Frank	<i>Madison</i>	M. E.
Rove, Louis Claude	<i>Milwaukee</i>	M. E.
Rumpel, Arthur Henry	<i>Milwaukee</i>	C. E.
Ryan, William Dennis	<i>So. Kaukauna</i>	C. E.
Saberhagen, Edward Elmer	<i>Sheridan, Wyo.</i>	M. E.
Saecker, Carleton Engler	<i>Appleton</i>	M. E.
Schlosser, William Clarence	<i>Chicago, Ill.</i>	E. E.
Schmidt, Clarence Walter	<i>Brillion</i>	E. E.
Schmidt, Edwin	<i>Milwaukee</i>	M. E.

Schmidt, Paul Herman	<i>Milwaukee</i>	Ch. E
Schneider, Claire Leslie	<i>Madison</i>	E. E.
Schrader, Herbert Eugene	<i>So. Kaukauna</i>	M. E.
Schrank, Edward Sylvester	<i>Ashland</i>	M. E.
Schwartz, Ernest Henry	<i>Mayville</i>	Min. E.
Searight, Hamilton Folts	<i>Austin, Texas</i>	C. E.
Seelbach, Kurt Louis	<i>Cleveland, Ohio</i>	M. E.
Seybold, Lawrence Frederick	<i>Forest Jct.</i>	F. E.
Shaw, Harold Nichols	<i>Milwaukee</i>	E. E.
Shiels, Kenneth Grinnell	<i>Madison</i>	M. E.
Shnable, Earle Potter	<i>Wilmette, Ill.</i>	M. E.
Staidl, Joseph Arnold	<i>Shawano</i>	Ch. E.
Storer, Richard Milton	<i>Des Moines, Iowa</i>	Ch. E.
Tan, Nelson Bo	<i>Peking, China</i>	Ch. E.
Townsend, John Baner	<i>St. Joseph, Mo.</i>	E. E.
Tufty, Harold Guilford	<i>Duluth, Minn.</i>	E. E.
Van Ermen, Louis	<i>Green Bay</i>	Ch. E.
Vernon, Joseph Rexford	<i>Madison</i>	C. E.
Wall, James Joseph	<i>Eau Claire</i>	E. E.
Walz, Chester Davison	<i>Louisville, Ky.</i>	E. E.
Welk, Harold Emil	<i>Manitowoc</i>	C. E.
Whitcomb, Kenneth Frederick	<i>La Salle, Ill.</i>	M. E.
White, Robert Bruce	<i>Wilmette, Ill.</i>	M. E.
Wichnovitz, Peter Ernest	<i>Marinette</i>	E. E.
Wilcox, Burr Curtis	<i>Madison</i>	M. E.
Wilder, Willard Smith	<i>Madison</i>	E. E.
Williams, John Wesley	<i>Racine</i>	Ch. E.
Wirka, Raymond Michael	<i>Madison</i>	M. E.
Yates, De Witt Edward	<i>Chippewa Falls</i>	M. E.
Zahorik, Peter Antqn	<i>Milwaukee</i>	C. E.
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Sophomores

Albers, Walter Leland	<i>Prairie du Sac</i>	E. E.
Bachhuber, Gilbert Eugene	<i>Mayville</i>	Min. E.
Bagemihl, Michael Walter	<i>Milwaukee</i>	M. E.
Balderston, William	<i>Boise, Idaho</i>	C. E.
Barrows, Kenneth Campbell	<i>Duluth, Minn.</i>	E. E.
Becker, David Dallas	<i>Galesville, Mich.</i>	Min. E.
Behrens, Ray Emil	<i>West Allis</i>	C. E.
Bellock, Willard Bernhard	<i>Columbus</i>	M. E.
Blattner, David Jones	<i>Sulphur, Okla.</i>	E. E.
Blowney, Walter Edward	<i>Waukegan, Ill.</i>	E. E.
Blume, George Martin, Jr.	<i>New York, N. Y.</i>	Ch. E.
Bodenstein, Alexander Frederick	<i>Madison</i>	C. E.
Bohn, Donald Ivan	<i>Madison</i>	M. E.
Braun, Alvin Charles	<i>Milwaukee</i>	Ch. E.
Brenner, Erwin Charles Julius	<i>Milwaukee</i>	Ch. E.
Brewer, Richard Wallace	<i>Mineral Point</i>	E. E.
Breyvogel, Allie Lloyd	<i>Brodhead</i>	M. E.
Brill, William	<i>Green Bay</i>	C. E.
Broker, Harvey Raymond	<i>Chilton</i>	Ch. E.

Butler, Merrill Francis	<i>Appledon</i>	C. E.
Camlin, Harold Andrew	<i>Rockford, Ill.</i>	M. E.
Campbell, Lawrence Franklin	<i>Oshkosh</i>	M. E.
Charlson, Melvin Robert	<i>Eau Claire</i>	C. E.
Charmock, Elroy Jonas	<i>Racine</i>	E. E.
Christensen, Harold Lund	<i>Berlin</i>	Ch. E.
Collins, Carl Harold	<i>Madison</i>	E. E.
Cox, John Van Brunt	<i>Horicon</i>	E. E.
Cross, Charles Willard	<i>Waldo</i>	E. E.
Dahlen, Caleb Manuel	<i>Madison</i>	C. E.
Davis, Malvin	<i>Reedsburg</i>	E. E.
Davis, Russell Gardner	<i>Milwaukee</i>	M. E.
Dequine, George Frederick	<i>Fond du Lac</i>	E. E.
Dey, Van Brunt	<i>Waukesha</i>	E. E.
Dresen, Joseph Ignatius Herman	<i>Madison</i>	M. E.
Edmunds, Melvin	<i>Aberdeen, S. Dak.</i>	E. E.
Elwood, Charles Davidson	<i>Madison</i>	M. E.
Fisbeck, Finley Leland	<i>Terre Haute, Ind.</i>	C. E.
Frank, Reimar August	<i>Milwaukee</i>	M. E.
Frater, George Gordon	<i>Elkhorn</i>	M. E.
Fratt, Charles Diller, Jr.	<i>Madison</i>	M. E.
Fuller, Howard Hastings	<i>Madison</i>	E. E.
Gallun, Edwin Alfred	<i>Milwaukee</i>	M. E.
Gerhardt, Fred Peter	<i>Milwaukee</i>	C. E.
Glaettli, Herbert	<i>Milwaukee</i>	C. E.
Greenslade, Irving Jones	<i>Milwaukee</i>	E. E.
Gregg, Scranton Hugh	<i>Milwaukee</i>	C. E.
Griswold, Milton Pettit	<i>Madison</i>	M. E.
Grosse, Joseph Anton	<i>Cross Plains</i>	E. E.
Hall, John Alexander	<i>Fargo, N. D.</i>	C. E.
Hanson, Maurice Miller	<i>Madison</i>	C. E.
Hasenpflug, John Leroy	<i>Geneva, Ohio</i>	E. E.
Hawkins, Raymon Nelson	<i>Milwaukee</i>	Ch. E.
Haznaw, Louis Frank	<i>Watertown</i>	Ch. E.
Heffernan, Raymond Arthur	<i>Green Bay</i>	C. E.
Holmes, Presley Dixon	<i>Southwest Harbor, Me.</i>	Ch. E.
Ives, Clifford Elihu	<i>Sharon</i>	M. E.
James, Burton Egbert	<i>La Crosse</i>	M. E.
Kane, Eugene Aloysius	<i>Chicago, Ill.</i>	E. E.
Keating, Paul Hepburn	<i>Pueblo, Colo.</i>	E. E.
Keats, John	<i>Milwaukee</i>	Ch. E.
Keuchel, John Nicholas	<i>Lake Geneva</i>	E. E.
King, Tower Wadsworth	<i>Madison</i>	E. E.
Knapp, Harold Clark	<i>Milwaukee</i>	Ch. E.
Koehler, Walter A.	<i>Mishicot</i>	Ch. E.
Kurtz, Henry William	<i>Sheboygan</i>	C. E.
Kurtz, Paul Henry	<i>Two Rivers</i>	M. E.
Ladwig, William John	<i>Juda</i>	E. E.
Lange, William Hobart	<i>West De Pere</i>	C. E.
Lehman, Donald Griffith	<i>Waupaca</i>	E. E.
Light, Robert Ferguson	<i>Dayton, Ohio</i>	C. E.
Lillesand, Lynn Norman	<i>Stoughton</i>	E. E.
Link, Marcus William	<i>Madison</i>	Min. E.

Loomis, Casey Vaughn	<i>Milwaukee</i>	E. E.
Lyman, Alfred Tileston	<i>Milwaukee</i>	M. E.
McCallum, Verni Ernest	<i>Rowan, Iowa</i>	E. E.
McCollum, George Willard	<i>Rice Lake</i>	E. E.
McCullough, Allen Chase	<i>Oshkosh</i>	E. E.
McGraw, Vincent George	<i>Racine</i>	C. E.
McManus, James Francis, Jr.	<i>Chicago, Ill.</i>	F. E.
Mainland, Irvine Chadwick	<i>Kenosha</i>	M. E.
Mantonya, William George	<i>Chicago, Ill.</i>	M. E.
Mariotte, Walter Williams	<i>Etroy</i>	E. E.
Marshall, Oren Herbert, Jr.	<i>East Troy</i>	M. E.
Mather, Lyman McConnell	<i>La Grange, Ill.</i>	E. E.
Meath, Charles Arthur	<i>Cylon</i>	E. E.
Meihack, Albert William	<i>Eagle River</i>	E. E.
Melcher, Burton Walter	<i>Madison</i>	Ch. E.
Mertes, John Peter	<i>Eden</i>	Ch. E.
Mighton, Merrill Wallace	<i>Painesville, Ohio</i>	E. E.
Mikna, Alois Joseph	<i>Milwaukee</i>	M. E.
Miller, Chester Joseph	<i>Milwaukee</i>	Ch. E.
Mitchell, John Sidney	<i>La Crosse</i>	E. E.
Moss, Charles Wallace	<i>Mattoon</i>	E. E.
Moulton, Frank Stillman	<i>Madison</i>	C. E.
Mueller, Emmet John	<i>Milwaukee</i>	M. E.
Murat, Walton Belford	<i>Scandinavia</i>	M. E.
Myers, Charles Albert	<i>Madison</i>	M. F.
Nelson, Delmar Wood	<i>Peshtigo</i>	M. E.
Nelson, Howard George	<i>Carrollton, Ill.</i>	E. E.
Nordmeyer, Carl Louis	<i>Madison</i>	M. E.
Oberly, John Joseph	<i>Milwaukee</i>	Ch. E.
Peters, Leo James	<i>Edgemont, S. Dak.</i>	E. E.
Peterson, Lynnford Lawrence	<i>Deming, N. M.</i>	E. E.
Prince, Earl Samuel	<i>Downer's Grove, Ill.</i>	Min. E.
Puerner, Bertram Harvey	<i>Jefferson</i>	M. E.
Puerner, Russell Edward	<i>Jefferson</i>	M. E.
Radke, Orville Edward	<i>Madison</i>	E. E.
Rankl, Fred Anthony	<i>Milwaukee</i>	C. E.
Reinhard, Raymond Colton	<i>Tomah</i>	E. E.
Robertson, Martin Rindlaub	<i>Indianapolis, Ind.</i>	M. E.
Robison, Bryan	<i>Chippewa Falls</i>	E. E.
Rood, Arnold Ellsworth	<i>Whitewater</i>	E. E.
Rosenberg, Edwin Herbert	<i>Madison</i>	E. E.
Royer, Paul Anson	<i>North Milwaukee</i>	M. E.
Schaal, Norbert James	<i>Princeton</i>	M. E.
Schaper, Harold Henry	<i>Milwaukee</i>	M. E.
Schlueter, Henry John	<i>Richland Center</i>	C. E.
Schmidt, Ethan Warner	<i>Chicago, Ill.</i>	M. E.
Schneider, George Russell	<i>East Liverpool, Ohio</i>	C. E.
*Schrom, Theodore James	<i>Madison</i>	M. E.
Schuyler, Philip Kingsland	<i>Orange, N. J.</i>	C. E.
Schwebke, Harry John	<i>Milwaukee</i>	C. E.
Scott, Kenneth Loyal	<i>Madison</i>	E. E.

*Died February 3, 1917.

Smith, Philip Harold	<i>Oconto</i>	C. E.
Smith, Robert Harold	<i>Wauwatosa</i>	C. E.
Spees, Edgar Addison	<i>Plainfield</i>	E. E.
Steinle, Clinton Rolland	<i>Madison</i>	M. E.
Stern, Emil Fred	<i>West Allis</i>	M. E.
Svitavsky, Robert Ingersoll	<i>Racine</i>	E. E.
Swift, John Disnonef	<i>Portage</i>	M. E.
Tillisch, Michael Ravn	<i>Merrill</i>	E. E.
Warren, Glenn Barton	<i>Girard, Kans.</i>	M. E.
Waung, Cho Jan	<i>Soochow, China</i>	C. E.
Werba, Otto Edward	<i>Milwaukee</i>	Min. E.
Williams, Edward Barnes	<i>Milwaukee</i>	M. E.
Wise, Edmund Merriman	<i>Fond du Lac</i>	E. E.
Works, Lawrence Perry	<i>Madison</i>	E. E.
Youngberg, Adolf Frederick	<i>La Crosse</i>	M. E.
Zarse, Clarence Henry	<i>Milwaukee</i>	Ch. E.
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Freshmen

Adams, Edward Ernest	<i>Madison</i>
Afleck, Herbert John	<i>Muscoda</i>
Alexander, Robert Hunter	<i>Zanesville, Ohio</i>
Allen, Littleberry Calhoun	<i>Shreveport, La.</i>
Amel, Floyd Adelbert	<i>Shawano</i>
Ames, Melvin Dewey	<i>Madison</i>
Amidon, George Wallace	<i>Milwaukee</i>
Anderson, Edgar Willis	<i>Manitowoc</i>
Anderson, Gerald Andrew	<i>Whitehall</i>
Anthony, Herman Russell Chidsler	<i>Madison</i>
Arpin, Edward Arsene	<i>Grand Rapids</i>
Avery, N. Kirk	<i>Peoria, Ill.</i>
Babbitz, Henry Lucius	<i>Milwaukee</i>
Baker, Loyal Southwick	<i>Evansville</i>
Baumann, Walter Otto	<i>Medford</i>
Bautz, Garland Jasper	<i>Milwaukee</i>
Bellis, Mark Edward	<i>Wausau</i>
Bergman, Miles Joseph	<i>Bark River, Mich.</i>
Bille, Harold Wilhelm	<i>Marshfield</i>
Blom, Max	<i>Louisville, Ky.</i>
Bohlender, William Elmore	<i>Dayton, Ohio</i>
Bradford, Theodrick William	<i>Grand Rapids</i>
Bramlette, Milton Nunn	<i>Madison</i>
Brewer, Orval William	<i>Manitowoc</i>
Bristol, Fern Watson	<i>Oakfield</i>
Brown, Theron Adelbert	<i>Madison</i>
Buckingham, Lyman Everett	<i>Ludington, Mich.</i>
Buckley, John William	<i>Grand Rapids</i>
Burr, William Garcia	<i>Santiago, Chile</i>
Bushell, Robert Earl	<i>Racine</i>
Carlson, Louis Albert	<i>Milwaukee</i>
Carpenter, Everett N.	<i>Milwaukee</i>
Carson, William Henry, Jr.	<i>Pittsburg, Texas</i>

Chamberlain, George Henry
 Charlton, Alexander Richard
 Chiang, Chen Le
 Chudacoff, George
 Church, Carl Adelbert
 Cirves, Frank Herman
 Clarke, Caryl Chapin
 Condron, George Tolman
 Congdon, Claire Cressey
 Connolly, Harry
 Connor, Edward Hanson
 Conway, David Gabriel
 Cram, Kenneth Blaisdell
 Cretney, Robert Wesley
 Cummings, Willis Bachelder
 Dahlen, Andrew Oliver
 Dale, Leslie Harry
 Day, Harold Paton Scott
 Dean, Horace Kleffler
 DeSombre, Karl Herman
 Dierfeld, Arnold Henry
 Dobberpuhl, Raymond H.
 Edwards, Max Hadsell
 Emanuel, Walter Arthur
 Erickson, William Ernest
 Fabian, Philip Joseph
 Farrington, Ralph Waldo
 Ferguson, John James
 Fiedler, Elmore Walter
 Foulkes, George Clarke
 Fox, Stuart K.
 Gardner, Ralph David
 Gaubatz, Arthur William
 Geussenhainer, Frederick William
 Giddings, William Werner
 Goerner, Erwin Fuhr
 Gould, Stevens
 Gray, Charles Richardson
 Griswold, Frank Lynn
 Griswold, Henry Farnam, Jr.
 Gross, George H.
 Hall, John Wesley
 Hamacheck, Daniel Fred
 Hamilton, Frank John
 Hamilton, Roy Ezra
 Hankin, Harry
 Hanley, Edward Vincent
 Hanson, Clarence Ferdinand
 Hantzsch, Ralph Eugene
 Hastings, Henry Lawrence
 Hatlen, Hjelmer Oscar
 Hawn, Gavin Campbell
 Hays, Frank Sevarance

Milwaukee
Milwaukee
Shanghai, China
Peshtigo
Sheridan, Wyo.
Madison
Milwaukee
Oak Park, Ill.
Delavan
Racine
Leavenworth, Kans.
Waunakee
Chicago, Ill.
Ridgeway
Chicago, Ill.
Madison
Galesville
Shullsburg
Milwaukee
Fond du Lac
Whitewater
Cedarburg
Madison
Fall Creek
Madison
Hurley
Wyncena
Plain
Sheboygan Falls
Terre Haute, Ind.
Chicago, Ill.
Beloit
Chilton
Sheboygan
Mendota
Milwaukee
Oshkosh
Washington, D. C.
Madison
Madison
Milwaukee
Hinsdale, Ill.
Two Rivers
Madison
Almond
Marinette
Milwaukee
Waupaca
Milwaukee
Kenosha
Chippewa Falls
Asheville, N. C.
Superior

Hiestand, Francis Hall
 Hill, Russell James
 Hockings, William Francis
 Holmes, Harold Frederick
 Hooper, Noel James
 Howard, George Ephriam
 Huber, Herman Harry
 Hulbert, Milton Frank
 Hymer, Howard Golden
 James, Roy Walter
 Johnson, James Warren
 Johnson, Leonard Marion
 Kachelhoffer, Fred George
 Karger, Frank
 Keeley, Calvert Constant
 Kelley, William Harold
 Kelly, Pennell Clarke
 Kerler, Ernest Alfred
 Kidder, Charles Pomeroy
 Kincannon, Leo Theodore
 King, Kenneth Jacob
 Kitchingman, Raymond Frank
 Klandrud, Lester Otis
 Klann, Alvin Rietbrock*
 Klingler, Charles Henry
 Kranzfelder, Louis John
 Krause, Gustavus Theodor
 Krotz, Alva Shirley
 Kuebler, George Benjamin
 Kummerow, Paul Frederick, Jr.
 Lamont, Dallas Ralph
 Lenck, Arthur Roy
 Lewis, William Turner
 Liebert, Arthur Eugene
 Limberg, Leland J.
 Lindemann, Herbert Eddie Albert
 Loeb, Ralph Ellis
 Lugoff, Leonard Seymour
 Lundberg, Gusta
 Lusted, Howard Leslie
 McAdams, Frank Clarence
 McClintock, Alan Carr
 McConnell, James David, Jr.
 *McIntosh, Kenneth Dargon
 Mann, Louis Russell
 Manthey, Rollin Henry
 Martens, Armin
 Martin, Orville Wells
 May, George Louis
 Meisekothen, Edwin Edward
 Melvin, Roy Earl

Madison
Chicago, Ill.
Burlington
Trempealeau
Houghton, Mich.
St. Croix Falls
Milwaukee
Reedsburg
Madison
Madison
Rye, Fla.
Orfordville
Madison
Milwaukee
West Bend
Milwaukee
Ft. Atkinson
West Allis
Madison
Excelsior
Superior
Racine
Galesville
Milwaukee
Milwaukee
Bloomer
Colfax
Janesville
Wausau
Fond du Lac
Oregon
Milwaukee
Racine
Milwaukee
Plymouth
Milwaukee
Milwaukee
Duluth, Minn.
Superior
Lake Mills
Madison
Oshkosh
Stevensville, Mont.
Bradford, Pa.
Muskegon, Mich.
Ableman
Mayville
Oshkosh
Stevensville, Mont.
Madison
Wausau

*Died February 3, 1917.

Mench, Eugene L.
 Merwin, Gile Ernest
 Meyer, Royal Lewis
 Meyrick, Gordon Sumner
 Miles, Benjamin
 Miller, George Paul
 Miller, Harry Irl
 Miller, Robert Lee
 Mitchell, Donald Eugene
 Montessori, Mario
 Morice, Elton Knight
 Morsell, Curtis Benedict
 Mortiboy, Lea
 Mueller, Emil Arthur
 Murphy, Robert Joseph
 Nash, Clyde
 Nash, Garrett John
 Nelson, Hilding Franklin
 Nicholson, Miller
 Nordby, Marshall Bertrand
 Oetjen, Richard John
 Olson, Arthur Oliver
 Olson, Earl Vivan
 Olson, Edward Erick
 Olson, Julian
 Paddock, Rychen Mayhew
 Peterson, Clarence William
 Pond, Stuart Andrew
 Porter, John William
 Potter, Rusk Philetus
 Prosser, Isador Carleton
 Ragatz, Roland Andrew
 Rashid, Jacob Karl
 Ray, Otto Adolph
 Reading, Clyde William
 Reineking, Winston Frederick Charles
 Reuter, William Robert
 Rheingans, William Jacob
 Rice, Alexander
 Richardson, Claude Irwin
 Roedel, Leo Jacob
 Rose, Donald Ghering
 Rowland, Harry Eugene
 Rubel, Henry Michael, Jr.
 Rush, John Courtney
 Saunders, Neill McIntosh
 Schindler, Walter Gabriel
 Schluter, Harold John
 Schmidt, Carlton Leonard
 Schmidt, Ray Otto
 Schrage, Charley Thayer
 Sherburne, Lewis Raymond
 Sherr, Joe Robert

Beaver Dam
Trempealeau
Kewaunee
Milwaukee
Riverside, Ill.
Madison
Madison
Milwaukee
Beloit
New York, N. Y.
Madison
Milwaukee
Taylor
Baraboo
Kenosha
Eau Claire
Two Rivers
Rockford, Ill.
Lakewood, Ohio
Mellen
Williams Bay
Madison
Wausau
Milwaukee
Hixton
Wyoming, Ohio
Salem
Madison
Madill, Okla.
Antigo
West Milwaukee
Madison
Avoca
Fish Creek
Oak Park, Ill.
Milwaukee
Milwaukee
Jackson
Milwaukee
Dane
Beaver Dam
Madison
Hutchinson, Kans.
Cincinnati, Ohio
Joplin, Mo.
Wilmette, Ill.
New Glarus
Moline, Ill.
Avoca
Davenport, Iowa
Sheboygan
Fremont
Milwaukee

Sickert, Otto Leonard
 Siegel, Robert Charles
 Silbernagel, Edward
 Skow, Charles Theodore
 Slaker, Donald Valentine
 Smith, Robert Evans
 Snider, William Herbert
 Spafford, Allen
 Steele, Will Robert
 Stelling, Lenno Albert
 Stewart, John DeMuth
 Stiles, Dwight Hawthorne
 Stockum, Samuel Frederick
 Swinson, Edwin Albert
 Taylor, Edwin Lucius
 Taylor, J. L., Jr.
 Taylor, Thomas Dewey
 Terry, Halstead Coleman
 Thompson, Francis Henry
 Thorne, Thomsen Francis
 Timm, Harold Daniel
 Tishler, Hyman
 Toner, Harold James
 Tooman, Arthur Ronald
 Torgeson, Oscar Windfield
 Toupal, Adolph Charles
 Trantin, Ernest
 Turneure, Frederick Stewart
 Tuthill, Howard
 Valier, Ronald Robert
 Van Slyck, Louis Wellington
 Velguth, Waldemar
 Voss, Forest Earl
 Waldo, Donald Edwin
 Walraven, Peter
 Walters, Warren Weis
 Welch, Halbert Austin
 Wheeler, Charles Eugene, Jr.
 White, Arthur Bradford
 Whitnall, George Reynold
 Wiepking, Christopher Armin
 Wilhelm, Henry Arthur
 Wise, Sol
 Wright, Duey Ervin
 Wright, Lewis Marion
 Zieske, Albert Roland
 Zimmerman, Lee R.
 Zimmerman, Wallace

*Milwaukee
 Madison
 Wausau
 Racine
 Freeport, Ill.
 Milwaukee
 Davenport, Iowa
 Morrison, Ill.
 Lodi
 Osceola
 Madison
 Lake Mills
 Wausau
 Galesville
 Westfield
 Barker, N. Y.
 Chicago Heights, Ill.
 Lowell
 Edgerton
 Riverside, Ill.
 Grand Rapids
 Milwaukee
 Madison
 Racine
 So. Madison
 Lena
 Madison
 Madison
 Grand Rapids, Mich.
 La Crosse
 Lake Geneva
 Milwaukee
 Mazomanie
 Columbus
 Kenosha
 Madison
 Oconomowoc
 Betoit
 Madison
 Milwaukee
 Grafton
 Marshfield
 Cincinnati, Ohio
 Wausau
 West Allis
 Madison
 Monticello
 Beaver Dam*

Adult Specials

Bloomquist, Gustave Emanuel	<i>New Diggins</i>	E. E. Junior
Drolenga, Nicholas Clarence	<i>Elroy</i>	Freshman
Fahlberg, Ernest David	<i>Madison</i>	Ch. F. Junior
Flatman, George James	<i>Madison</i>	E. E. Sophomore
Goff, Harold Wheeler	<i>Eau Claire</i>	E. E. Senior
Jensen, Alford Magnes	<i>Madison</i>	Freshman
Knoerr, Rudolph Robert	<i>Milwaukee</i>	Freshman
Lorig, Robert Alexander	<i>S. Milwaukee</i>	M. E. Sophomore
Redin, LeRoy Wilmer Cornelius	<i>Rockford, Ill.</i>	Freshman
Schroeder, Alfred George	<i>Madison</i>	Min. E. Junior
Wertheim, Ferd Eliel	<i>Madison</i>	M. E. Senior

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LAW SCHOOL

Third Year

Allman, Major Fisher	<i>Crown Point, Ind.</i>
Anderson, Morgan MacDonald, B. A.	<i>Milwaukee</i>
Beers, Stanley Emerson	<i>Madison</i>
Bishop, Stuart Alfred	<i>Madison</i>
Boreson, Bradner Frank	<i>Beloit</i>
Breakstone, Irving	<i>Oconto</i>
Brendel, Roy Albert, B. A.	<i>Milwaukee</i>
Broadfoot, Grover Lee	<i>Mondovi</i>
Brunkow, Arthur Herman	<i>Marshall</i>
Brunner, Louis John	<i>Madison</i>
Bull, Benjamin Henry	<i>Madison</i>
Carey, George	<i>Beloit</i>
Carpenter, Byron Joseph	<i>Stevens Point</i>
Caskey, Earl James, B. A.	<i>Beloit</i>
Collette, William Harold	<i>Green Bay</i>
Ewers, Robert Ferdinand, B. A.	<i>Milwaukee</i>
Gleick, Harry Samuel, B. A.	<i>Webster Groves, Mo.</i>
Godfrey, Alfred Laurance, B. A.	<i>Whitewater</i>
Gullickson, Gerhardt Oscar, B. A.	<i>Eau Claire</i>
Horner, Louis Cowdick	<i>Madison</i>
Jackson, Raymond Thomas, B. A.	<i>Mineral Point</i>
Jolley, Albert Rembrandt	<i>Whitewater</i>
King, George Yeldham	<i>Tigerton</i>
Kleinpell, Arthur, B. A.	<i>Cassville</i>
Loomis, Orlando Steen	<i>Mauston</i>
Malone, Donald Bourke	<i>Beaver Dam</i>
Meuer, William Joseph, B. A.	<i>Madison</i>
Murphy, John William	<i>Platteville</i>
Napiecinski, Peter Anthony	<i>Two Rivers</i>
Neuenschwander, Adolph Herman	<i>Athens</i>
Neuenschwander, Edward John	<i>Athens</i>
Pomeroy, Herbert Stuart, B. A.	<i>Madison</i>

Pors, William Emil
 Potter, Louis Richard
 Pottinger, Earl Henry
 Puetz, Harold Henry
 Ramsdell, Bailey Edwin, B. A.
 Sanborn, Philip Golder
 Smith, Kenneth Blume, B. A.
 Smith, Melville Alsworth
 Smith, Walton Kimball, B. A.
 Stack, William Cornelius
 Werba, Arthur Marcus
 Wilson, Charles Atwater
 Young, Carl Fred

Marshfield
Milwaukee
Fort Atkinson
Madison
Madison
Madison
Viroqua
Milwaukee
Milwaukee
Superior
Milwaukee
Superior
Green Bay

—45

Second Year

Altenhofen, Roland Frederick
 Alvord, Ellsworth Chapman I s
 Benton, John Knox, B. A.
 Biart, Nathaniel Paul, B. A.
 Bogner, Ernst William George
 Brendenmuehl, Alvin Gottfried
 Brody, Lawrence John
 Brunner, Stephen Walter
 Caradine, Mahlon Humphrey I s
 Cunningham, Robert John, B. A.
 Dunn, Charles Bryan
 Fahrion, Louis Edward, B. A.
 Forehand, Harry Verne
 Frawley, James Robert, B. A.
 Glassner, William, B. A.
 Gooding, Laurence Earl
 Gross, John, Jr., B. A.
 Janes, Arthur DeWitt
 John, Henry Walter, B. A.
 Johnson, Russell Lowell, B. A.
 Kuehn, John Frederick
 Lebowsky, Charles Adolph
 McGaughey, Guy E., B. A.
 McKay, John Gordon, B. A. g
 McWilliams, Glenn John
 Mallonee, L. Dee
 Marsh, Carl James
 Peterson, Evan Hugo
 Phelan, Vincent Laurence
 Porter, Carl Elder
 Raeder, Lester William
 Rawson, Harry Walker, B. A.
 Robinson, Philip Kyle
 Schmidt, Karl August
 Shuttleworth, Ferrand Dames
 Slocumb, Ira Otis

Cedarburg
Washburn
Richland Center
Madison
Tanunda, S. Australia
Watertown
Cashlon
Madison
Monroe
Janesville
Madison
Madison
Platteville
Eau Claire
Milwaukee
Fond du Lac
Madison
Tomah
Madison
Madison
Madison
Milwaukee
Lawrenceville, Ill.
Madison
Darlington
Madison
Madison
Stockholm
Sandusky
Madison, S. D.
Cedarburg
Plainfield
Madison
Wausau
Madison
Neillsville

Toohy, John Croft
 Tuteur, Armand Joseph
 Wattawa, John
 Whiffen, Clarence Fred, B. A.
 White, Irvin Arnold, B. A.
 Whyte, Malcolm Kenneth, B. A.
 Wickham, J. Arthur
 Wilberscheid, Jacob Charles
 Wilkinson, James Richard, B. C.
 Winton, Eugene Ward

Superior
La Crosse
Madison
Madison
Antigo
Madison
Eau Claire
Valders
Madison
Appleton

First Year

Barnett, Joseph Evans
 Behnke, Carl Edwin
 Bishop, Eugene Alford
 Bowey, Harry J.
 Brown, George Everett
 Buelow, Earl Francis, B. A.
 Conley, Emmett Joseph
 Curran, Robert Emmet
 De Witt, Roy Martin
 Eder, Abraham John, B. A.
 Eielson, Carl Ben
 Flanagan, Arthur Eugene
 Foley, Leon Francis
 Foss, Arthur Rolf
 Grotophorst, Carl
 Hill, Charles Roeliff
 Hoffman, Ernest Louis
 Jenkins, Lyel Newton
 Kloetzner, Ottomar
 Lappley, Gilbert Frost
 Loberg, Jesse Dewey, B. A.
 Lucas, Spencer Alexander
 McFetridge, George William, B. A.
 Mitchell, John Gordon
 O'Hara, John Edwin
 Park, Lyman Barnes
 Parker, Ira Sheldon, B. A.
 Pors, Charles Miller, B. A.
 Pritzlaff, Edward Frank
 Riley, Harry William
 Roberts, David Webster
 Robertson, Richard, B. A.
 Rosenberg, Edwin Leo
 Salen, Herman Roy
 Staidl, Steve A.
 Stevenson, William Henry
 Sutherland, Robert J.
 Thiele, Arthur Albert
 Thorpe, Byron McKown

Lancaster
Manawa
Gillner, Nebr.
Eau Claire
Platteville
Waupun
Superior
Berlin
Sparta
Milwaukee
Hatton, N. Dak.
Lannon
Grand Rapids
Onalaska
Plain
Whitewater
Thiensville
Leon
Milwaukee
Milwaukee
Nelsonville
Sparta
Clam Falls
Milwaukee
Madison
Stevens Point
Tomahawk
Marshfield
Milwaukee
Winneconne
Superior
Meridian
Milwaukee
Waukesha
Shawano
Onalaska
Madison
Green Bay
Blue River

Thurwachter, Loron Francis
 Trottman, Joseph Stafford, B. A.
 Uhlman, Lamont Douglas
 Van Camp, William John
 Volk, Hubert Thomas
 Wurster, Carroll Barton
 Zetteler, Howard Lester

Waukesha
Milwaukee
Robert's
Winneloan, Nebr.
Plymouth
Mazomanie
Milwaukee

—46

Law Specials

Barrett, Albert Charles Louis	<i>Chippewa Falls</i>	First
Bentley, Bert Cecil	<i>Baraboo</i>	First
Bloor, George James	<i>West Allis</i>	First
Brossard, Matthew	<i>Madison</i>	First
Brunner, Marie Angelina	<i>Madison</i>	Third
Dean, Harry Carpenter	<i>Glenwood City</i>	First
Dean, James Stanley	<i>Milwaukee</i>	Third
Dimmick, Earle Winter	<i>Black River Falls</i>	First
Dinerstein, Isadore	<i>Milwaukee</i>	First
Gavigan, Francis Hugh	<i>Waukesha</i>	First
Gleason, Bernard Robert	<i>Bruce</i>	First
Goodsitt, Lawrence Manfred	<i>Milwaukee</i>	First
Hartman, George Anthony	<i>Juneau</i>	Third
Juster, Eugene Meyer	<i>Milwaukee</i>	First
Klassy, Ernest Robert	<i>Monticello</i>	First
Landry, Leo John	<i>Tomahawk</i>	Second
Lehner, Otto	<i>Oconto Falls</i>	Second
Loftsgordon, Henry Albert	<i>Madison</i>	First
Luecker, Elmer William	<i>Brillion</i>	First
MacQuaid, John Harrison	<i>Milwaukee</i>	Second
Monk, Robert William	<i>Neillsville</i>	First
Petersen, James Daniel H.	<i>La Crosse</i>	Second
Robinson, Harry William	<i>La Crosse</i>	First
Robson, Marshall William	<i>Stoughton</i>	First
Schultz, Edward Emil	<i>Juneau</i>	Third
Shemick, Frank William	<i>Marinette</i>	Second
Smith, Fred Michael	<i>Depere</i>	Second
Steeholm, Hardy	<i>Racine</i>	First
Thauer, Wallace	<i>Watertown</i>	First
Thurwachter, Raleigh Holmes	<i>Janesville</i>	First
Uehren, Robert Monat	<i>Chippewa Falls</i>	First
Wilbert, Gustave Carl	<i>Thiensville</i>	First

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Students in Letters and Science Electing Law Studies

Beach, Richard W.
 Bird, George E.
 Burmeister, Roy Frederick
 Hansen, Erick
 Johnston, Charles Frederick, Jr.
 Keeley, Clarence Armand
 Kinne, Harold Everett

New Castle, Ind.
Wausau
Gratiot
Milwaukee
Sheffield, Iowa
Mayville
Orofino, Idaho

Langer, Harold Myron
 Loverud, Alvin Matthew
 Mitchell, John Lendrum
 Newman, John Logan
 Peters, Robert Leroy
 Peterson, James Dahle
 Powell, Henry Miller
 Schweichler, Lothar Adolph
 Seibold, Fred Carl
 Taylor, Paul Schuster
 Thieme, Cyrus Charles
 Werner, Walter Albert
 Wheeler, Sylvester Lawrence
 Zischke, Herman Albert

Waterloo
 Stoughton
 Milwaukee
 Milwaukee
 Blue River
 Minneapolis, Minn.
 Reedsburg
 Milwaukee
 Camp Douglas
 Sioux City, Iowa
 So. Milwaukee
 Adams
 Waunatosa
 Horicon

-21

COLLEGE OF AGRICULTURE

LONG COURSE

Seniors

Aeppler, Carl William t c
 Ames, Norton Travis
 Anderson, Hilding Edward
 Bailey, Ernest Hayden
 Bailie, Arthur Ray
 Baldwin, Harry McLaughlin t c
 Barlass, Robert McFarlane t c
 Barrett, John Walton
 Bauman, Gus Adolf, Jr.
 Beck, Arnold Joel
 Becker, Oscar John
 Belden, John Ellsworth
 Belden, Stanley Raymond
 Blaisdell, James Brooks
 Blatchford, Percival John
 Brusse, William
 Burnham, Donald Robert t c
 Burwell, Edward Langworthy, Jr. t c
 Campbell, John Walter t c
 Carr, Carlyle t c
 Carson, William Waller
 Chandler, George Anthony
 Colville, Clarence Leroy
 Crothers, Donald Hayne t c
 Desnoyers, Philip Baird
 Dietz, Eugene Francis
 Dorsey, Louise Lydia
 Downing, Charles James
 Downing, John Fonda, Jr.

Campbellsport
 Oregon
 North Crandon
 Madison
 Lancaster
 Brooklyn
 Janesville
 Freeport, Ill.
 Quincy, Ill.
 Arcadia
 Melvina
 Racine
 Racine
 Madison
 Chicago, Ill.
 Baldwin
 Waupaca
 Madison
 Lakeside, Ohio
 Madison
 Birmingham, Ala.
 St. Louis, Mo.
 Rogers, N. Dak.
 Neillsville
 Green Bay
 Madison
 Anchorage, Ky.
 Kansas City, Mo.
 Louisville, Ky.

Duddleston, Benjamin Harrison
 Edler, Ray Charles
 Erwin, Grant West
 Evers, William, Jr.
 Felton, Louis Norman
 Frazier, William Carroll t c
 Geimer, Maxmillian Peter
 Giese, John William t c
 Gilman, Carl Callow
 Gross, Erwin George
 Gundersen, Borge Carl
 Harbach, Ralph August
 Hargrave, Archibald Russell
 Hart, Milton Edward
 Hay, Ellsworth
 Heider, Frederick Alonso t c
 Hickey, James Sheridan
 Hill, George O'Neil
 Hodgson, Albert Lee
 Hopper, Ward Loan t c
 Horst, Edward Gustav t c
 Horton, Raymond Edgar
 Jabsman, William Edward t c
 Jungkunz, William Kunz t c
 Kasten, Albert William t c
 Kauffman, William Frederick
 Keating, Fred Earl t c
 Kelley, Kenneth Moseley t c
 Kellogg, Robert Ensign t c
 Knott, Arthur William
 Lerner, Nathan Hyman t c
 Lewis, Stevenson Paul
 Loescher, Clarence Albert
 McAdams, Arthur James t c
 MacArthur, Hugh
 McCudden, Louis Daniel t c
 Machlis, Joseph Arthur t c
 Marquardt, Julius Charles t c
 Martin, August Henry t c
 Martin, Ross George t c
 Mengel, Joseph Torbitt
 Moore, George William
 Morgan, Robert Edward
 Mosher, James Barnes
 Mucks, Arlie Max
 Noble, Harrison Robert
 Pettis, Charles Semple
 Pope, Charles Alfred
 Post, Samuel t c
 Quick, Victor Hugo
 Raymundo, Mariano Bartolome
 Roberts, Harlow Pliny
 Roberts, John Basil

La Valle
Chippewa Falls
Milwaukee
Negaunee, Mich.
Mer Range, La.
Madison
Madison
Kewaunee
Linden
Merrimac
La Crosse
Milwaukee
Ripon
Chicago, Ill.
Beloit
Kewaunee
Milwaukee
Rosendale
Mazomanie
Oshkosh
Superior
Chicago, Ill.
Manawa
Freeport, Ill.
Madison
Madison
Ogdensburg
Tomah
Randolph
Eau Claire
New York City, N. Y.
Cleveland, Ohio
Menasha
Mukwonago
Superior
Iron River
Madison
La Crosse
Reedsburg
Oregon
Louisville, Ky.
Burke
Oshkosh
Prophetstown, Ill.
Oshkosh
Manitowoc
Madison
Racine
Madison
Peshigo
Morong, Rizal, P. I.
Madison
Madison

Robinson, Arthur Harrison
 Rogan, Hubert Edward t c
 Schafer, Harold George
 Schelling, Edward William t c
 Sedgwick, James Howard
 Settle, Edward J.
 Shear, Sherwood William
 Sheffer, Lafayette Miles
 Sholl, Lloyd Banks
 Skalitsky, Ernest Elmer t c
 Slagg, Charles Mervyn
 Smith, Carman Bigelow
 Smith, David William
 Steul, Edwin Karl
 Stone, Francis Downing t c
 Strelzin, Morris Harry t c
 Thompson, John Abbott
 Van Evera, Rynier
 Wagner, Melvin Ferdinand
 Wallrich, William
 Walton, Charles William
 Weaver, Russell Oran
 Wells, James Earl t c
 Wentzel, Harvey Julius
 White, Morris Densmore
 Wright, Merton LaMont
 Wright, Morris Harry
 Zuehlke, Ulrich Randolph

Madison
 Racine
 Chilton
 Racine
 Peoria, Ill.
 Bozeman, Mont.
 Vienna, Va.
 Morganfield, Ky.
 Milwaukee
 Marshall
 Cambridge
 Bay City, Mich.
 Mazomanie
 Madison
 South Range
 Milwaukee
 Madison
 Marquette, Mich.
 Haven
 Shawano
 Scales Mound, Ill.
 Dayton, Ohio
 Mitchell, S. Dak.
 Oshkosh
 Superior
 New London
 New London
 Milwaukee

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Juniors

Albertz, Hugo William t c
 Anderson, Harry Gerhart
 Banta, George Veyne
 Barnes, William, Jr.
 Bascom, Deane Smith t c
 Behling, Fred Louis
 Benkert, Roy Frederick
 Billerbeck, Lawrence Markert
 Binney, Thomas Henry
 Brace, Charles Curtis
 Bradford, William Russell
 Brann, Andrew Jacob
 Brant, Howard Jonathan t c
 Brown, Sidney Thompson
 Brunkow, Orvin Richard
 Button, Milton Harold
 Caldwell, Donald Alan
 Campbell, Stuart Vande Veer
 Casterline, Charles Ross
 Chandler, William Stephen t c
 Clark, Elmer Russell t c

Watertown
 Washburn
 Logansport, Ind.
 Decatur, Ill.
 Madison
 Johnson Creek
 Monroe
 Milwaukee
 Gilbert, Minn.
 Lone Rock
 Bonham, Texas
 Baileys Harbor
 Youngstown, Ohio
 Waterloo
 Darlington
 Lone Rock
 Madison
 Kansas City, Mo.
 West Salem
 Waupaca
 Lodi

Clarke, Carroll Curtis
 Conrey, Hugh Frank
 Cornish, Harry Bridges
 Cowie, Earl Galbreath
 Craig, Walter Scott
 Crowell, Solon Donald
 Cummings, John Holbrook
 Dally, Walter Robert
 Davis, Deane Griswold t c
 Dixon, Spurgeon Herschel
 Dyer, Porter Smith t c
 Ellis, Ned Royce
 Fargo, John Merrill
 Finner, Emil Erich
 Ford, Marion Conner
 Frederixon, Reider Ronald
 Fütterer, Wolfram Alexander
 Gallentine, Julian Seymour
 Gatton, Cyrus John
 Gibson, Harry Irven
 Gibson, Irven Gray t c
 Grams, William Theodore
 Gratiot, Edward Collins
 Hammen, Edwin August
 Hancock, Howard Joseph t c
 Harris, Carl Quantick t c
 Hartwell, Richard Winsor t c
 Hatleberg, Clarence Nels Bugge
 Heck, Christian George
 Heisig, Adolph William
 Hendrickson, Clarence Irving
 Hill, John Hugh
 Hills, Carroll Cody
 Hoesly, Henry Chester
 Horlamus, Orlando Oswald
 Jantzen, Allons L.
 Jensen, Severt Martin
 Johnson, Clarence Stanley
 Johnson, Leland S.
 Kappel, Gustav Ulrich t c
 Kelley, William Michael
 Kendall, Elizabeth Norris
 Kennard, Dwight Clinton
 Kivlin, Vincent Earl t c
 Koch, William Walter
 Korst, Fred Alexander
 Kralovec, Arthur James
 Lacy, James Jerome
 Lang, Edgar F. t c
 Lee, Julian Orville
 Lieberstein, Franklin Leslie t c
 McClure, Richard Alfred
 Malloy, Edward John

Madison
 Madison
 Ft. Atkinson
 Superior
 Janesville
 Paw Paw, Ill.
 Oberlin, Ohio
 Milwaukee
 Duluth, Minn.
 Madison
 De Soto
 Lancaster
 Mt. Horeb
 Dodge
 Bowling Green, Ky.
 Blair
 Chicago, Ill.
 Morrison, Ill.
 Bozeman, Mont.
 Madison
 Platteville
 Watertown
 Shullsburg
 Chicago, Ill.
 Shullsburg
 Chicago, Ill.
 Mazomanie
 Madison
 Racine
 Mt. Horeb
 Argyle
 Wyocena
 Evanston, Ill.
 Monroe
 West Bend
 Milwaukee
 Clinton
 Iron River, Mich.
 Grand Rapids
 Waldo
 Mitchell, S. Dak.
 Chicago, Ill.
 Santa Rosa, Cal.
 Oregon
 Davenport, Iowa
 Janesville
 Chicago, Ill.
 South Wayne
 Jefferson
 Clinton
 Cascade
 New York, N. Y.
 Port Washington

Marshall, Richard Hughes
 Meyer, William Frederic
 Moore, Glenn Edward
 Moore, Robert Lyman
 Nelson, Elmer Martin
 Oliver, Myrl Lee
 Osborn, Guy Asa
 Overbaugh, Merrill Herbert
 Payton, James Martin Anthony
 Pedley, Timothy Asbury, Jr. t c
 Peirce, Harry Edgar
 Phillips, William Butterworth
 Preston, Nathaniel Gifford
 Priewe, Elmer Clarence
 Reid, William H. E. t c
 Remsberg, Oscar Zachariah
 Ross, Charles Waldo
 Ross, Herbert Hugo
 Ross, William Herman
 Roth, Edward Walter t c
 Ryall, Ernest Van t c
 Schacht, Harland George
 Schapper, Ferdinand Edwin
 Schrader, Albert Lee t c
 Scott, Cornelius Chapman, Jr.
 Shane, Tracy Ray
 Shapiro, Harold Jack
 Shearman, William Hugh
 Smith, Dudley Chase, Jr.
 Sommer, Hugo Henry
 Sponholz, Herbert Herman
 Stueber, George Henry
 Sullivan, Francis Thomas t c
 Taylor, John Radford
 Tennis, Gilbert Theodore
 Varney, Verne Vincent t c
 Walker, William Allen
 Wallin, Franklin Whittelsey
 Walsh, Charles Earl
 Wanzer, Howard Stanley
 Warner, John Clement
 Weed, Linton Gilmore t c
 Wenstadt, Julius Louis
 Whitney, Francis Edward
 Wild, Seargent Peabody t c
 Williams, Guy P. t c
 Williams, Judson Sparks
 Wolfram, Julius August t c
 Zellmer, Milton C.

Madison
Milwaukee
Albion, Ind.
Humbird
Grand Rapids
Eau Claire
Kenilworth, Ill.
Harland
Madison
Owensboro, Ky.
River Falls
Evanston, Ill.
Brodhead
Orangeville, Ill.
La Crosse
Buckeystown, Md.
Mansfield, Pa.
Milwaukee
Milwaukee
Milwaukee
Ladysmith
West Bend
Powers Lake
South Kaukauna
Darlington, S. C.
Bangor
Milwaukee
Chicago, Ill.
Normal, Ill.
Sheboygan
Milwaukee
Juneau
Arena
Bozeman, Mont.
Stanley
Greenwood
Racine
Grand Rapids, Mich.
Eau Claire
Chicago, Ill.
Madison
Phelps
Shawano
Milwaukee
Chicago, Ill.
Oconto
Bristol
Ft. Atkinson
Oshkosh

Sophomores

Albrecht, Harold Taylor
 Altschwager, Edwin Henry
 Anderson, Daniel Alvin
 Bethke, Roland Martin
 Black, Archie
 Boerner, Charles Frederick
 Brewster, Herbert George
 Brown, Harry Henry
 Bruder, Edgar George
 Burr, Allen Russel
 Chipman, Harold Robert
 Cole, Harold Harrison
 Conger, Paul Sidney
 Corstvet, Thomas Edward
 Cramer, Herbert Lyle
 Crandall, Allen Russell
 Crowgey, Richard Reginald
 Dayton, Willard Louis
 Dreier, Allman Vernon
 Drips, William Edward
 Eke, Paul Axle Clarence
 Fardy, Charles Michael
 Farrington, Edgar George
 Gibson, Percy DeWitt
 Gulmore, Albert Frank
 Graff, Edward Crolus
 Grashorn, Robert Andrew
 Greenfield, Russell Snow
 Griem, Milton Emil
 Griswold, Lincoln Bon
 Hackney, Jacob Sidwell
 Hales, Harry Orin
 Hardell, Robert Edwin
 Hayes, William Platt
 Heassler, Earl Albert
 Henn, John Erwin
 Hitchcock, Morris Leroy
 Hood, Robin
 Hovde, Harold Arthur
 Hurley, Edward Knight
 Jacques, James Theodore
 Jeffers, Austin Pierpont
 Jennett, Clarence Bernard
 Jensen, Francis Field
 Jones, James Hazlitt
 Kaasa, Leonard Jerome
 Keane, Homer Emmett
 King, C. Howard
 Kornreich, Eugene
 Lacey, David Robert

Merrill
 Sheboygan
 Chippewa Falls
 Elkhart Lake
 Ft. Atkinson
 Wheeling, W. Va.
 East Troy
 Platteville
 Mayville
 Waterloo
 Morrisonville
 Marshall
 Prairie du Sac
 Milwaukee
 Mendota
 Richmond, Ill.
 Wytheville, Va.
 Rhinelander
 Norwalk
 Madison
 Bruce
 Mukwonago
 Mondovi
 Washington, D. C.
 Madison
 Hinsdale, Ill.
 Greenwood
 Superior
 New Holstein
 Tomah
 Uniontown, Pa.
 Granton
 Washington, D. C.
 Asheville, N. C.
 Madison
 Chicago, Ill.
 Edgerton
 Palacios, Texas
 Washburn
 Chicago, Ill.
 Neillsville
 Jeffers, Mont.
 Streator, Ill.
 Ogdensburg
 Spring Green
 Merrill
 London
 Madison
 Milwaukee
 Madison

Lade, Arthur William
 Larson, George William
 Lasher, Philip Henry
 Lee, Dih Hoe
 Little, George Clifford
 Mansfield, Oral Wilson
 Meacham, Elmer Reynolds
 Meineke, Norman Theodore
 Miller, Emil Alfred
 Mobley, Basil
 Murat, Sidney Parkman
 Nadeau, Louis Brooks
 Nafziger, Ralph Otto
 Nicoll, Edward William
 Nightingale, William Isaac
 Owen, Carl Frederick
 Patterson, Leon Shreve
 Person, Reynolds Clark
 Pond, Willard Tucker
 Puerner, Wilfred Julius
 Quasigroch, Leopold J.
 Riley, Victor Bradford
 Roehma, Linus Theodore
 Shape, Carl Theodore
 Shepard, Gordon Hastings
 Sheridan, Martin James, Jr.
 Smith, Robert George
 Smith, Robert Norman
 Splittgerber, Albert Herman
 Spoor, Francis Perl
 Stehn, Richard John
 Stewart, John Elden Lee
 Stokdyk, Ellis Adolph
 Stoltenberg, Hugo Adolph
 Stumpf, Harry A.
 Thomas, David Griffith
 Thompson, Charles Aycock
 Tillotson, Robert Forrest
 Turner, Charles Wesley, Jr.
 Tuttle, Thomas Westley
 Van Lone, Eldyn E.
 Vennus, Elizabeth Mary
 Walderbach, William Edward
 Walton, Joseph Levi
 Wang, Chin Wu
 Weller, Walter Trowbridge
 Wendt, Walter Alfred
 Wertz, Virgil Roe
 Wilcox, Arthur Noble
 Woline, Ernst Wilhelm

Campbellsport
Gilmanton
Elgin, Ill.
Shanghai, China
Park Falls
Indianapolis, Ind.
Downing
Two Rivers
Superior
Derwood, Md.
Scandinavia
Nadeau, Mich.
Benton Harbor, Mich.
Kenosha
Antigo
Mayville
Evansville
Madison
Chicago, Ill.
Jefferson
Madison
Chippewa Falls
Ashland
Milwaukee
Mineral Point
Madison
Frankfort, Ind.
Mineral Point
Waterloo
Berlin
Chicago, Ill.
West Allis
Sturgeon Bay
Timothy
Menasha
Randolph
Goldsboro, N. C.
Detroit, Mich.
Madison
Verona, N. J.
Jefferson
Menasha
Hartford
Moorestown, N. J.
Honan, China
Fond du Lac
Juda
Madison
Madison
Cumberland

Freshmen

Baker, Leonard John
 Baldwin, Richard Walsh
 Baldwin, Robert Donald
 Ballantine, George Neal
 Ballantine, James Roland
 Beck, Frederick Lowe
 Bent, Wylie Chandler
 Bill, Anne Sophe
 Boeck, Edwin William Robert
 Booth, Edwin Ray
 Bradner, Charles Edward
 Brandon, William McKinley
 Brodersen, Leroy
 Bullis, Leslie James
 Burg, Oliver Michael
 Burns, Alexander Bradley
 Butts, Stanley Van Dyke
 Caldwell, Thomas Beverly
 Capel, James Borzilla
 Carswell, Harry Eaton
 Cartter, Bruce Lanpher
 Christy, Robert Harry
 Clark, Thomas Collier
 Crandall, George Washington
 Crane, Wilder
 Daane, Edwin Henry
 Day, Kenneth Sterling
 Doonan, Gerald Joseph
 Drewry, Charles Bemrose
 Eide, Arthur Melvin
 Fink, Howard Rolland
 Fogg, Russell Harding
 Forbus, Edward Law
 Ford, Lester Dixon
 Frost, Russell Elwell
 Hamlin, John Francis
 Healy, Warren Cameron
 Hipke, Gilbert Jacob
 Hipkins, Jesse Nelson, Jr.
 Hoard, William Dempster, Jr.
 Knapstein, Raymond Ferdinand
 Langum, Clinton Gilman
 Leaper, Vern Clayton
 Lepkovsky, Samuel
 Luban, Simon
 McAdam, Lincoln Grant
 McCabe, Lester Follett
 McDonald, Martin Eugene
 Mates, Clay Franklin
 Mathews, Edward Washington

Fond du Lac
Chicago, Ill.
Brooklyn
Bloomington
Bloomington
Sharon, Pa.
Madison
Madison
Milwaukee
Monroe
Powers, Mich.
Madison
Harlan, Iowa
Eau Claire
Wausau
Downers Grove, Ill.
Tomah
New Orleans, La.
Milwaukee
Richland Center
Black River Falls
Eureka, Kans.
Evanston, Ill.
Madison
Stanley
Sheboygan
Cleveland, Ohio
Superior
Waldo
Cumberland
Kenosha
Toledo, Ohio
Nitta Yuma, Miss.
Trempealeau
Madison
Lula, Miss.
Seattle, Wash.
New Holstein
Wheeling, W. Va.
Ft. Atkinson
New London
Eau Claire
Green Bay
Kenosha
Milwaukee
Beloit
Duluth, Minn.
Menomonie
Belmont
Wheeling, W. Va.

Megeath, Jessie
 Moy, William Schoephoister
 Mulrooney, Leonard Joseph
 Murphy, Lawrence Edwin
 Neelen, Robert Bruno
 Nord, Samuel K.
 Olson, Leonard Chester
 Pfaler, Joseph Andrew
 Pinney, John James
 Post, William Jobse
 Pryor, George Russel
 Rankin, Eugene Joseph
 Ruhsam, Erwin Henry
 Sayre, Baxter Page
 Scherneck, Edward George
 Schneider, Howard Stang
 Schomberg, Richard Jost, Jr.
 Smith, Wyman Sydney
 Stemmler, William
 Strickland, William James
 Uhl, Allen Philip
 Ulmer, Charles Henry
 Van Hagen, George Ely
 Vanderjagt, Ellis Leonard
 Wall, Floyd Russell
 Warren, Wadsworth, Jr.
 Wolf, Archie Andrew
 Wolf, Frank Charles

*Ardsley-on-Hudson, N. Y.
 Mondovi
 Mt. Hope
 Algoma
 Milwaukee
 Rice Lake
 Weyerhaeuser
 Madison
 Sturgeon Bay
 Milwaukee
 West Allis
 Forestville
 New London
 Edgerton
 Madison
 Madison
 Milwaukee
 Brandon
 Milwaukee
 Coronado, Cal.
 Galesville
 Pottsville, Pa.
 Barrington, Ill.
 Milwaukee
 Highland
 Detroit, Mich.
 West Salem
 Mazomanie*

-78

MIDDLE COURSE

Second Year

Amundson, Robert Andrew
 Bachmann, Earl Arthur
 Barbour, John Menzies
 Bean, Orin True
 Blow, Harold Matt
 Bovee, Lemuel Franklin
 Bowstead, John Edelston
 Cahoon, Edward David
 Cook, Arthur Marsh
 Dance, Benjamin Dixon
 Davidson, Robert Mowbray
 Davis, Evan Raymond
 Dawson, Thomas Bainbridge
 Doeringsfeld, Carl Louis
 Drew, Floyd Richard
 Eicke, Carl Arthur
 Erbach, William A.
 Fish, Warren Lyman
 Hammond, Robert L.
 Hembre, Helmer John

*Rio
 Mosinee
 Helena, Mont.
 De Soto
 Waupun
 Bayfield
 Maaisson
 Racine
 Grand Rapids, Mich.
 Brookfield
 Boise, Idaho
 Green Bay
 Benton
 Fennimore
 McAlester, Okla.
 Indianapolis, Ind.
 Athens
 Kilbourn
 Cottage Grove
 Greenwood*

Hill, Gillette
 Hines, Raymond Louis t c
 Hunsader, Arthur John t c
 Johnson, Alfred William
 Koeniger, Edward Russell
 Kutil, Clarence Leonard
 Madden, Thomas Joseph t c
 Manz, Alvin Henry
 Martin, Loren Ormus
 Norgaard, Uffe Jensen t c
 Pattinson, Lester Lee
 Peterson, Roger Franklin
 Potter, Harold Wiswell
 Reese, Gordon Braman
 Roberts, Charles Von Lunen
 Rouse, Julius Howard
 Sabine, Ralph Paul
 Sargent, Harold James
 Sargent, Lawrence Densmoor
 Saul, Willis
 von Schenk, Karl Richard
 Schoeninger, William Jacob
 Schroeder, Gufto Christian
 Schwantes, Arthur John
 Stillman, Jay Howard t c
 Tolman, Blanche Stevens
 Turner, Victor Caesar
 Van Lone, Orlo Winfield
 Williams, Russell Lawrence
 Wolf, Homer Herbert

Galveston, Texas
Prescott
Algoma
Lake Geneva
East Orange, N. J.
Manitowoc
New London
Eau Claire
West McHenry, Ill.
Withee
Darlington
Chicago, Ill.
Etikhorn
Milford, N. H.
Johnstown, Pa.
Paynes Depot, Ky.
Washington, D. C.
Madison
Madison
Depere
Rockville, Conn.
Chicago, Ill.
West Bend
Kewaunee
Madison
Chicago, Ill.
Madison
Jefferson
Baraboo
La Crosse

—50

First Year

Austin, Kenneth Ward
 Barnes, Harrison Crain
 Bergman, Edwin Jasper
 Carmody, Arthur Michael
 Cooley, Charles Frederick, Jr.
 Crump, Kenneth Mosher
 Cuff, Clarence Hamelton
 Dasso, Augusto César
 Dickinson, Albert Boyd
 Doke, Howard Bailey
 DunWiddie, Leon Foster
 Ellison, Hjalmar Olaf
 Gasser, Lloyd Emerson
 Giles, Fred Dexter
 Green, George Emal
 Hall, Clarence Hays
 Hanson, Harry Erwin
 Harkrader, Vance Creighton
 Hipes, Luster Eugene

Neillsville
Grand Forks, N. Dak.
Bark River, Mich.
Mt. Hope
Madison
Lake Mills
Hortonville
Boston, Mass.
Lake Geneva
Stamford, Conn.
Delavan
Superior
Plain
Delavan, Ill.
Ligonier, Ind.
Yorkville, Ill.
Chippewa Falls
Wytheville, Va.
Prescott

Howard, Frank Emerson
 Jacobi, Gustav Reinhold
 Johnson, Albert Randolph
 Knutson, Arthur Magnus
 Koch, John William
 Kolensky, Edward John
 Krueger, Wabun Clarence
 La Due, Charles Mayo
 Lampman, Clifford Elmer
 Mathews, James Anthony
 Matthes, Charles Dewey
 Modesitt, Pansy Mae
 Moe, Melvin
 Newman, William Shadwick
 Niles, Frank Ernest
 Nussbaum, Hamilton Smith
 Olson, Russell Eugene
 Omdahlen, Perry Thomas
 Pinkerton, John, Jr.
 Reynolds, Thomas Albert
 Ridgman, Chester Percy
 Rundell, Paul
 Schmidt, George Albert
 Smith, Claire Kindwall
 Stanbury, Robert Ogervie
 Strodthoff, Erwin William
 Suhs, Fred Allen
 Trumbo, Riley Ambrose
 Vine, Chauncey Kenneth
 Wagner, Worth Edward

Madison
Grand Forks, N. Dak.
East Orange, N. J.
Sawyer
Milwaukee
Two Rivers
Sawyer
Lu Verne, Minn.
Arena
Ashland
Viola
Terre Haute, Ind.
Whitehall
Juda
Lake Geneva
Chicago, Ill.
Chicago, Ill.
Rice Lake
Waupaca
Monroe
Grand Rapids
Roberts
Arcadia
Chippewa Falls
Superior
Manitowoc
Waupaca
Marseilles, Ill.
Packwaukee
Knoxville, Iowa

COURSE IN HOME ECONOMICS

Seniors

Alderson, Vera Louise t c
 Anderson, Esther Hannah t c
 Aurland, Helen
 Barker, Helen Elizabeth t c
 Beatty, Mary Elizabeth t c
 Briggs, Rosa Fitch t c
 Brundage, Dorothy t c
 Buchner, Gladys Rhodes t c
 Cook, Dorothy Margaret t c
 Cooley, Margaret Hamilton
 Dahle, Thea Otelia
 Eckert, Helen Elizabeth t c
 Gasser, Mary Elizabeth t c
 Gaubatz, Alma Therese t c
 Gavin, Ellen M.
 Gunderson, Nellie May t c
 Hanpeter, Hildegard Elizabeth t c

Chicago, Ill.
Cambridge, Ill.
Minot, N. D.
North Freedom
Davenport, Iowa
East Grand Forks, Minn.
Grand Rapids
Milwaukee
Madison
Jamaica, N. Y.
Mt. Horeb
Webster Graves, Mo.
Madison
Chilton
Omaha, Nebr.
Madison
St. Louis, Mo.

Hudson, Katherine
 Jones, Marjorie Helen t c
 Kent, Hazel Eva t c
 Kleinheinz, Frances Margaruite t c
 Koch, Elizabeth Emma
 Lewis, Jane Deborah t c
 Lottes, Marie
 Lubeno, Vera
 Martin, Ramona Theora t c
 Matthewson, Norma Naomi t c
 Nagler, Genevieve Catherine t c
 Orr, Flora Gracia t c
 Overholser, Vinnie t c
 Ray, Florence t c
 Ray, Margaret Elizabeth t c
 Reed, Helen Morse t c
 Roberts, Dorothy t c
 Scheid, Emerald Amelia t c
 Scheinplug, Marie Mabel t c
 Schuler, Ann t c
 Seymour, Helen Elmina t c
 Speerstra, Ruth t c
 Waring, Grace Anna
 Wengel, Edith Magdalene
 White, Amy Gertrude t c
 Whittemore, Thelma Attalie t c

Charleston, Ill.
Portage
Madison
Madison
Madison
Portage
Madison
Trevor
Michigan City, Ind.
De Kalb, Ill.
Osceola
Mt. Hope
Sterling, Ill.
Madison
Madison
Necedah
San Diego, Cal.
Madison
Boscobel
Milwaukee
Madison
Whitehall
Washington, D. C.
Madison
Mineral Point
Huntington, W. Va. —43

Juniors

Bennett, Helen Houghton
 Bigelow, Vieve Marion
 Bird, Carol t c
 Bond, Marjorie Anette
 Branine, Hazel Eliot t c
 Broune, Warren Katherine t c
 Butler, Maribel Jeannette
 Case, Dorothy Serena t c
 Churchill, Helen Petrovna t c
 Cooley, Ray
 Cronin, Helen Catherine t c
 Cronin, Magdalen t c
 Cumming, Helen Maria t c
 Davis, Helen McKie t c
 Dickerson, Dorothy Wheeler t c
 Enger, Frances Mildred t c
 England, Emma Alvina t c
 Findorff, Dorothy Catherine t c
 Foley, Anne Cecelia t c
 Fultz, Edith t c
 Garrow, Leona May t c
 Gifford, Esther Emeline t c
 Gifford, Ysobel Jordan t c

Interlaken, N. Y.
Madison
Madison
Green Bay
Hutchinson, Kans.
Waupaca
Marshall, Ind.
Detroit, Mich.
Monroe
Chicago, Ill.
Madison
Oconomowoc
Milwaukee
Delavan
Helena, Mont.
Chicago, Ill.
Prairie du Chien
Madison
Madison
Wichita, Kans.
Madison
Franksville
Dawson, Alaska

Goldfarb, Esther Laura t c
 Haessler, Marie Louise t c
 Hagerty, Mildred Isabel t c
 Hale, Wealthy Maria
 Hall, Wanda Hester
 Haner, Reba Cordelia t c
 Hawthorn, Hazel Waples (Mrs.)
 Hayes, Joanna Rose
 Healey, Martha Jane t c
 Heisig, Esther Helen t c
 Hodges, Virginia Clay t c
 Humphrey, Martha Estelle t c
 Jackson, Bettina
 Jobse, Myrtle Elvira t c
 Johnson, Hazel Orena t c
 Johnson, Mildred Emma t c
 Johnson, Verna Louise t c
 Karnopp, Evelyn Grace
 Kuhns, Ruth Cordelia t c
 Levy, Frances Eleanor t c
 McClymont, Alice t c
 MacDougall, Edwina Mae t c
 McGinnis, Dorothy Ellen t c
 McNulty, Sadie Agatha t c
 Madison, Betsey
 Martin, Frances Theodosia t c
 Martin, Helen Anne t c
 Moffitt, Frances Jean t c
 Morey, Marjorie Janet
 Morrissey, Nellie Ethel t c
 Noer, Ruth Douglas t c
 O'Malley, Frances Mary
 Paine, Dorothy t c
 Parkinson, Helen Elizabeth t c
 Peters, Avis Marie t c
 Reid, Janet Ella t c
 Rice, Helen t c
 Rogers, Margaret Gertrude t c
 Ross, Gale L.
 Rountree, Jennie Irene t c
 Russell, Gertrude Estelle
 Sage, Martha Ross
 Scheid, Garnetta Elsie t c
 Schnackenberg, Myrtie May t c
 Shadall, Norma Carolyn t c
 Sichler, Ida Mary
 Sims, Hazel Angeline t c
 Sinaiko, Sarah Rhena
 Smith, Helen Florence t c
 Smith, Vera Sarah
 Smylie, Hannah Bigelow t c
 Sprecher, Florence Mildred t c
 Stevens, Margaret Frances t c

Baraboo
Milwaukee
Knapp
So. Kaukauna
Eau Claire
Sun Prairie
Madison
Janesville
Webster Groves, Mo.
Madison
Madison
Madison
Madison
Milwaukee
Madison
Madison
Great Falls, Mont.
Mishicot
Madison
La Crosse
Milwaukee
Whitewater
Kansas City, Mo.
Spring Green
Bowling Green, Ky.
Michigan City, Ind.
Madison
Wichita, Kans.
Racine
Bloomington
Wabeno
Madison
Milwaukee
Madison
Madison
Hurley
Milan, Mo.
Lisle, Ill.
Schofield
Burlington
Madison
Delavan
Madison
Madison
Milwaukee
Alma Center
Kingslon
Madison
Madison
Kalamazoo, Mich.
Omaha, Nebr.
Madison
Yankton, S. Dak.

Stout, Llewellyn t c
 Thielke, Adele Marie t c
 Todd, Mary Margaret t c
 Townsend, Marion Margaret t c
 Ullrich, Dorothy Wilhelmina
 Van Wart, Ethel t c
 Walsh, Helen Marguerite
 Wilson, Elizabeth Nancy t c
 Wilson, Mary Estelle

Rice Lake
 Mayville
 Cincinnati, Ohio
 Des Moines, Iowa
 Evanston, Ill.
 Evansville
 Beloit
 Keokuk, Iowa
 Bethany, Nebr.

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Sophomores

Barnes, Ruth
 Barry, Grace Maurine
 Beattie, Marguerite Reno
 Bellinger, Frances
 Bollenbeck, Ida Kathryn
 Boyce, Marion
 Bruff, Winifred Jessie
 Bull, Irene Leota
 Burke, Edith Eleanor
 Campbell, Sara Eugenia
 Carpenter, Rachel Jane
 Christman, Mildred Irene
 Coldwell, Vera Iris
 Danforth, Mary Florence
 Dernehl, Emma Martha
 Dolan, Winifred
 Dumas, Marguerite Vera
 Dunwiddie, Jennette Martha
 Erikson, Kathryn Mary
 Faville, Laura Elizabeth
 Ferney, Regina Mary
 Fernald, Mabel Grace
 Ferris, Margaret Fraser
 Finucane, Grace Rosalind
 Fitzmaurice, Mary Teresa
 Flynn, Mary Gertrude
 Foote, Josephine Agnes
 Fuller, Elizabeth
 Gage, Marian
 Gough, Genevieve Elizabeth
 Graper, Florence Marie
 Groendyke, Mae
 Hancock, Miriam
 Horton, Mae
 Hussa, Mildred Marie
 Hutton, Margaret Isabel
 Johnson, Grace Alice
 Jones, Katherine
 Lewis, Marion
 Luther, Breta Marie

Madison
 Richland Center
 Madison
 Plainwell, Mich.
 Madison
 Milwaukee
 Hoopston, Ill.
 Beloit
 Madison
 Needham, Mass.
 Iron River, Mich.
 Joplin, Mo.
 Blue Mounds
 Washington, Ill.
 Milwaukee
 Cashton
 Madison
 Delavan
 Crystal Falls, Mich.
 Lake Mills
 Madison
 Madison
 Osage, Iowa
 Antigo
 Beaver Dam
 Waterloo
 Hartford
 Oak Park, Ill.
 Montclair, N. J.
 Boonville, Ind.
 Fort Atkinson
 Crawfordsville, Ind.
 Chicago, Ill.
 Pardeeville
 La Crosse
 Madison
 Portage
 Milwaukee
 Milwaukee
 Madison

Krueger, Dorothy Adelaide
 McConnell, Bessie Harriet
 Moore, Genevieve Downs
 Nemeck, Mildred Estelle
 Nienaber, Katherine Mable
 Olbrich, Marion Grace
 O'Neil, Miriam Catherine
 Osmundsen, Stella Mae
 Outhouse, Julia Pratt
 Paine, Adelaide
 Paull, Helen Grace
 Phillips, Alice Emma
 Pieh, Margaret Elizabeth
 Portz, Mildred Helen
 Rilling, Florence Frances
 Ryan, Marjorie Pearl
 Schneider, Veronica
 Sell, Mariana Theresa
 Severin, Gladys Marie
 Showers, Gladys Marguerite
 Soukup, Belle G.
 Stanchfield, Eleanor Jean
 Sutherland, Elizabeth
 Tamblingson, Wava Beth
 Trickey, Dorothy May
 Uzzell, Helen
 Ward, Dolores
 Wilson, Harriette
 Wolcott, Hazel Gertrude
 Wolfe, Margaret Josephine
 Yates, Lucile Margaret

River Forest, Ill.
Woodstock, Ill.
Joliet, Ill.
Winnipeg, Man.
Madison
Harvard, Ill.
Chippewa Falls
Madison
Madison
Milwaukee
Woodruff
Madison
Madison
Hartford
Milwaukee
Baraboo
Madison
Madison
Cedar Falls, Iowa
Delavan
Surgeon Bay
Fond du Lac
Hudson
Fort Atkinson
Berlin
Denver, Colo.
Madison
Milwaukee
Milwaukee
Madison
Oak Park, Ill.

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Freshmen

Abramson, Vittie Victoria
 Anawalt, Mary Carmelita
 Bennett, Leone Hannah
 Chamberlain, Mable Mathilda
 Chase, Eleanor Duane
 Cleveland, Catherine Eloise
 Coates, Carol Mathilda
 Collins, Frances Louise
 Cook, Katherine John
 Coulson, Ruth Antoinette
 Couton, Freeda Marguerite
 Cox, Martha Jane
 Crowell, Charlotte Lois
 Devine, Margaret Helen
 Dickson, Margaret Mary
 Donovan, Katherine
 Durant, Dorothy Otilie
 Edwards, Clara Alice

Chippewa Falls
Wilkinsburg, Pa.
Dodgeville
Madison
St. Louis, Mo.
Kensington, Md.
Milwaukee
Oak Park, Ill.
Madison
St. Louis, Mo.
Forsyth, Mont.
Horicon
Erie, Pa.
Madison
Indiana Harbor, Ind.
Baraboo
Quincy, Ill.
Fennimore

Elliott, Mary Katherine
 Fitch, Elizabeth May
 Fowler, Mary
 Gallagher, Tessie Arene
 Gebhard, Clara Mabel
 Harman, Helen Margaret
 Heisig, Gertrude Mathilde
 Helberg, Guinoir
 Helland, Eleanore Mathilde
 Hinman, Marjorie May
 Holtz, Minnie E.
 Hottel, Agnes Elizabeth
 Hutton, Mary Kinlock
 Ingwerson, Evangel Emma
 Ives, Harriet Ruth
 Kirk, Alice Jeannette
 Kuehn, Bernice Norris
 Lamb, Cleo Eleanor
 Leavitt, Hazel Ruth
 Lees, Katherine Elna
 Logemann, Margaret
 Lowe, Edythe Louise
 McLay, Christina Menzies
 McLay, Isabell Zuill
 Malm, Eleanor Frances
 Marsh, Marguerite Elizabeth
 Maxwell, Geraldine Elizabeth
 Meredith, Sarah Louise
 Miller, Ada Elizabeth
 Mittelstaedt, Irma Marion
 Morrison, Marjorie Ludington
 Poland, Ruth Grace
 Roehm, Margaret Hoatson
 Sanderson, Lucile Luetscher
 Scherneck, Mae Eleanor
 Schroeder, Meta Louise
 Schueler, Erma Amanda
 Sherman, Helen Julia
 Smith, Gertrude Beatrice
 Snyder, Flora Curry
 Spence, Erma Anna
 Stackhouse, Katherine Frances
 Steurwald, Ernestine Anna
 Stuckert, Eleanore Bertha
 Tallmadge, Naomi
 Tenney, Ellen Mae
 Tucker, Verna May
 Wood, Dorothy Belle
 Woodruff, Margaret
 Wright, Margaret
 Wuerpel, Lois
 Young, Frances Margaret
 Yung, Helen K.

Superior
Green Lake
Fithian, Ill.
Oak Park, Ill.
Wausau
Madison
Madison
Madison
Madison
Pontiac, Mich.
Ableman
Norwalk, Ohio
Madison
Kenosha
Delavan
Madison
Brandon
Ridott, Ill.
Beloit
Milwaukee
Milwaukee
Peoria, Ill.
Janesville
Janesville
Norfolk, Nebr.
Mankato, Minn.
Madison
Springfield, Ohio
Madison
Milbank, S. Dak.
Madison
Racine
Madison
Madison
Madison
Schofield
Fredonia
Appleton
Berwyn, Ill.
Ironwood, Mich.
Martins Ferry, Ohio
Indianapolis, Ind.
St. Ansgar, Iowa
Milwaukee
Chicago, Ill.
Madison
Wilmette, Ill.
Milwaukee
Mason City, Iowa
Berlin
St. Louis, Mo.
Grand Rapids, Mich.
Peotone, Ill.

Adult Special Students

LONG COURSE

Adams, Grace Arlena	<i>Omro</i>	Sophomore
Anderson, John Arlington	<i>Racine</i>	Sophomore
Brown, Lawrence Murphy	<i>Madison</i>	Junior
Couture, Arthur Joseph	<i>Rice Lake</i>	Junior
Fiedler, Albert Charles	<i>Madison</i>	Senior
Hammer, Lloyd Allen	<i>Madison</i>	Junior
Hughes, Daniel Patrick	<i>Union, Mont.</i>	Senior
Hussey, Joseph Michael	<i>Whitelaw</i>	Senior
Katel, Elmer John	<i>Kewaunee</i>	Freshman
Kirsch, William	<i>Madison</i>	Junior
Lustig, Joseph Charles	<i>Milwaukee</i>	Freshman
Schmidt, Walter Hubert	<i>North Crandon</i>	Freshman
Sergeant, Marshall William t c	<i>Madison</i>	Junior
Silva, Santiago	<i>New York, N. Y.</i>	Freshman
Tiedjens, Victor Alphons	<i>Marinette</i>	Freshman
Tosterud, Martin	<i>Caledonia</i>	Senior
Wood, Benjamin B.	<i>Duluth, Minn.</i>	Freshman

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MIDDLE COURSE

Caldwell, Cholett Beach	<i>Madison</i>	Freshman
Desebrock, Henry William	<i>Milwaukee</i>	Freshman
Gaffney, Edward James	<i>Madison</i>	Freshman
Kidder, Delos Bliss	<i>Highwood, N. J.</i>	Sophomore
Sprinkman, Arthur Cristle	<i>Milwaukee</i>	Freshman

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HOME ECONOMICS COURSE

Birong, Estella Marguerite	<i>Madison</i>	Junior
Foote, Nelle Margaret	<i>Hartford</i>	Freshman
Huseby, Nina Anna	<i>Madison</i>	Freshman
Keller, Sophia Dorothea	<i>Fond du Lac</i>	Junior
Mayfield, Grace Margaret	<i>St. Louis, Mo.</i>	Freshman
Winter, Lillian	<i>Madison</i>	Freshman

—6

WISCONSIN LIBRARY SCHOOL

Armstrong, Hazel E.	<i>Terre Haute, Ind.</i>
Carlson, Corinne J.	<i>St. Louis, Mo.</i>
Caton, Laura S.	<i>Ottawa, Ill.</i>
Clark, Charlotte H.	<i>Hudson</i>
Davis, Florence H.	<i>Grand Forks, N. Dak.</i>
Foley, Mae E.	<i>Manson, Iowa</i>
Foster, Beatrice	<i>Macomb, Ill.</i>
Fredrickson, Esther M.	<i>St. Joseph, Mo.</i>
Goodnow, Mildred F.	<i>Chicago, Ill.</i>

Hance, Emma O.
 Hook, Gladys M.
 Howard, Grace E.
 Jenks, Jessie P.
 Kidder, Harriet L.
 Laing, Hazel D.
 Lee, Mary B.
 Von der Lippe, Kathinka I.
 Lyons, Alice
 Melnikow, Esther
 Mueser, Emilie
 Osmotherly, Sue G.
 Price, Florence E.
 Richie, Emily M.
 Riesser, Josephine E.
 Root, Harriet T.
 Scanlan, Madaline M.
 Shelp, Blanche B.
 Sorenson, Ruth A.
 Stevenson, Helen S.
 Swain, Esther M.
 Wennerblad, Sonja

Washington, D. C.
 So. Milwaukee
 Buffalo, N. Y.
 Toledo, Iowa
 Madison
 Gladstone, Mich.
 Dubuque, Iowa
 Kristiania, Norway
 Brodhead
 Milwaukee
 New York City, N. Y.
 Hot Springs, S. Dak.
 Des Moines, Iowa
 Shelby, Mich.
 Ripon
 York, Pa.
 San Diego, Cal.
 Amsterdam, N. Y.
 Eau Claire
 Decatur, Ill.
 Detroit, Mich.
 Chicago, Ill.

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Joint Course

Carlton, Marjorie Frances
 Gilpin, Margaret
 Lind, Alberta Augusta
 Moehlman, Lillian Susan
 Swerig, Vivian Pearl
 Toby, Ruth Hull

Laurium, Mich.
 Duluth, Minn.
 Dover, Ohio
 Madison
 Madison
 Wausau

—6

SUMMER SESSION OF 1916

GRADUATES

Adam, Margaret	<i>St. Johns, Ore.</i>
B. A., University of Wisconsin	
Agrimson, Jacob A.	<i>Pittsville</i>
B. A., Red Wing Seminary	
Albaugh, Mary Edna	<i>Salt Lake City, Utah</i>
B. A., University of Utah	
Albray, Sarah Abbie	<i>Cincinnati, Ohio</i>
B. L., University of Cincinnati	
Allan, Winifred	<i>Rochester, N. Y.</i>
B. A., University of Rochester	
Allen, Marion Bradburn	<i>Cambridge</i>
B. A., University of Wisconsin	
Alvord, Carrie Ellen	<i>Washburn</i>
B. A., Macalester College	
Amery, Elizabeth	<i>Oscoda</i>
B. S., University of Wisconsin	
Anderson, George Alfred	<i>Ottawa, Kans.</i>
M. S., Purdue University	
Anderson, Zeta Hester	<i>Epworth, Iowa</i>
B. A., Cornell College	
Andrews, Mary Evelyn	<i>Powhattan, Kans.</i>
B. A., Kansas University	
Appleman, Winifred	<i>Clermont, Iowa</i>
B. A., University of Iowa	
Armington, Dorothy	<i>Dixon, Ill.</i>
B. A., University of Illinois	
Armstrong, Amy	<i>Lathrop, Mo.</i>
B. A., Baker University, Baldwin, Kans.	
Armstrong, George Miller	<i>Madison</i>
B. S., Clemson College	
Armstrong, Jean Bowman	<i>Connellsville, Pa.</i>
B. A., Hood College	
Atwood, Marion John	<i>Madison</i>
M. A., University of Wisconsin	
Atwood, William Henry	<i>Granite City, Ill.</i>
M. A., Washington University	
Avery, Elizabeth	<i>New York, N. Y.</i>
Ph. B., Cornell University	
Bachman, Irma	<i>Indianapolis, Ind.</i>
B. A., Butler College	

Baird, Edgar Alan g	<i>Madison</i>
M. A., University of Wisconsin	
Baird, William Jesse	<i>Berea, Ky.</i>
B. S., Berea College	
Baker, Elizabeth	<i>Madison</i>
B. A., University of Wisconsin	
Baker, Ethel May	<i>East Orange, N. J.</i>
B. A., Wellesley College	
Baker, Lillian Eloise	<i>East Orange, N. J.</i>
B. A., Wellesley College	
Baker, Roscoe Conklin	<i>Weston, Ohio</i>
B. S., Ohio Northern University	
Bancroft, Ross Leon	<i>Ames, Iowa</i>
M. S., Iowa State College	
Bannen, Dorothy Agnes g	<i>Milwaukee</i>
B. A., University of Wisconsin	
Banta, Lucile	<i>Burnett</i>
B. A., Georgetown College, Shelbyville, Ky.	
Barker, Henry D. g	<i>Mountain Rest, S. C.</i>
B. S., Clemson College, S. C.	
Barland, Agnes Louise	<i>Eau Claire</i>
B. A., Oberlin College	
Barnard, Elizabeth	<i>Earlville, Ill.</i>
B. A., University of Wisconsin	
Barnett, Stanley Pugh	<i>Danville, Ind.</i>
B. A., De Pauw University	
Bateman, Adelaide Ruth	<i>Colorado Springs, Colo.</i>
B. A., Colorado College	
Bateman, Lillian Grace	<i>Colorado Springs, Colo.</i>
B. A., Colorado College	
Bates, Lew Wallace	<i>Hebron, Ohio</i>
B. S., Hiram College, Ohio	
Bauman, Walter John	<i>Monroe</i>
B. A., University of Wisconsin	
*Baumgartel, Walter Herbert	<i>Fargo, N. Dak.</i>
B. S., North Dakota Agricultural College	
Beach, Floyd Clifford	<i>Beaver Dam</i>
B. A., State University of Iowa	
Beach, Sarah Morehouse	<i>Bridgeport, Ct.</i>
Ph. D., University of Wisconsin	
Beard, Irma Haynie	<i>Wilkesburg, Pa.</i>
M. A., University of Pittsburgh	
Beck, Maro Marguerite	<i>Warren, Ind.</i>
B. A., Ohio Wesleyan University	
Beebe, Joanna	<i>Princeton</i>
B. A., Ripon College	
Beegle, Frank Moore	<i>Wooster, Ohio</i>
B. S., Pennsylvania State College	
Begey, Nelle Marie	<i>Kansas City, Mo.</i>
B. A., Missouri State University	
Behnke, John Ernest	<i>Newark, N. J.</i>
B. A., Valparaiso University	

Belden, Carroll Reed	<i>Omaha, Nebr.</i>
B. S., Amherst College	
Bell, Helen Florentine	<i>Bristol, Pa.</i>
B. A., Smith College	
Bellis, William	<i>Mt. Pleasant, Mich.</i>
B. S., University of Chicago	
Benedict, Katherine Ladd	<i>Cleveland, Ohio</i>
M. A., Columbia University	
Bennett, Grace Alice	<i>Milwaukee</i>
Ph. B., Lawrence College	
Bennett, James Percy g	<i>Madison</i>
M. A., University of Missouri	
Berryman, Thomas	<i>Pittsburgh, Pa.</i>
B. S., Antioch College	
Beyer, Adelbert John	<i>Milwaukee</i>
B. A., University of Wisconsin	
Bibby, Irwin John	<i>Galesville</i>
M. S., University of Idaho	
Binder, Margarita	<i>Chicago, Ill.</i>
B. A., Vassar College	
Birch, Grace Washburn	<i>Greencastle, Ind.</i>
B. A., De Pauw University	
Birch, Lulu G.	<i>New Rochelle, N. Y.</i>
Ph. B., Cornell University	
Birdsell, Dorothea Elizabeth	<i>Antigo</i>
B. A., St. Mary of the Woods, Ind.	
Bishop, Erma Rosaline	<i>Pennsboro, Mo.</i>
B. S., University of Missouri	
Bishop, Eugene Alfred l	<i>Kansas City, Kans.</i>
B. A., York College, Nebraska	
Black, John Donald g	<i>Fort Atkinson</i>
M. A., University of Wisconsin	
Black, Lorraine Edna	<i>Green Bay</i>
B. A., Lawrence College	
Blackburn, Lura	<i>Oak Park, Ill.</i>
B. A., University of Wisconsin	
Blanchard, William Oscar g	<i>Oshkosh</i>
Ph. B., University of Wisconsin	
Blankenagel, John Carl	<i>Baltimore, Md.</i>
Ph. D., University of Wisconsin	
Blattner, George Wayman	<i>Madison</i>
B. A., University of Texas	
Bleck, Clara	<i>Naperville, Ill.</i>
B. A., Northwestern College	
Blizzard, Grace Rock	<i>Fonda, Iowa</i>
B. A., Cornell College	
Bodine, Wilfred Greenleaf	<i>Alton, N. H.</i>
B. S., University of Vermont	
Bogart, Franklin Blevins g m	<i>Madison</i>
B. S., University of Wisconsin	
Bohn, Ralph Maxwell g	<i>Madison</i>
B. S., University of Wisconsin	

Bohstedt, Gustav	<i>Madison</i>
B. S., University of Wisconsin	
Bolt, Cornelius Frederick	<i>Bismarek, N. Dak.</i>
B. A., University of Michigan	
Boone, Chelsea Charles	<i>Oconto</i>
B. A., Lincoln College	
Booth, Fern Valentine	<i>Chicago, Ill.</i>
B. S., Columbia Teacher's College	
Borgers, William Benjamin	<i>Chicago, Ill.</i>
B. A., University of Wisconsin	
Borthwick, Margaret Graham	<i>Los Angeles, Cal.</i>
B. A., University of Southern California	
Boundey, Alma Vater (Mrs.)	<i>Milwaukee</i>
B. A., University of Wisconsin	
Bowler, Joseph Lyndel	<i>Wichita, Kans.</i>
B. A., University of Kansas	
Bowser, Goldie May	<i>Gibsonburg, Ohio</i>
B. A., Oberlin College	
Boyd, Ellinor Fitzgerald	<i>Independence, Kans.</i>
B. A., Kansas University	
Boyle, Margaret	<i>Butte, Mont.</i>
B. A., University of Wisconsin	
Boyson, Maybelle	<i>Minneapolis, Minn.</i>
B. A., University of Minnesota	
Braam, Maximilian	<i>Cincinnati, Ohio</i>
M. A., University of Cincinnati	
Brandau, Justus Heinrich	<i>Dubuque, Iowa</i>
B. A., Dubuque German College and Seminary	
Brandt, Walter I. g	<i>Macfarland</i>
B. A., Luther College	
Breckon, William Darche g	<i>Oconomowoc</i>
B. S., Toronto University	
Brennecke, Alvina Mary	<i>Watertown</i>
B. A., University of Wisconsin	
Brenner, Emily Mary	<i>Port Carbon, Pa.</i>
B. S., Albright College	
Bressler, Raymond George	<i>Austin, Texas</i>
M. A., Wofford College	
Brister, Emma Louise	<i>Kenosha</i>
B. A., Ripon College	
Brittingham, Harold Hixon	<i>New Haven, Conn.</i>
B. A., Yale University	
Bronson, Reuben Harland	<i>Waupun</i>
B. S., Beloit College	
Brooks, Kendall Page	<i>Mt. Pleasant, Mich.</i>
M. A., University of Michigan	
Brooks, Laverne Wright	<i>Racine</i>
M. A., Lawrence College	
Brown, Josephine Chopin	<i>St. Paul, Minn.</i>
B. A., Bryn Mawr College	
Brown, Martha Elizabeth	<i>Daytona, Fla.</i>
B. A., University of Indiana	

Brown, Other Dwight	<i>Mead, Wash.</i>
B. A., Ohio Wesleyan University	
Brunelle, Augustus Hall g	<i>Madison</i>
M. A., University of Wisconsin	
Buckley, Mabel	<i>Washington, Iowa</i>
B. A., University of Iowa	
Buckner, James Morgan	<i>Fairfax, S. C.</i>
B. S., Clemson College, South Carolina.	
Buell, R. A.	<i>Watertown</i>
B. A., Beloit College	
Bullock, Mary Ethel	<i>Annandale, Minn.</i>
B. A., Aurora College	
Burns, Sara	<i>St. Paul, Minn.</i>
B. S., University of Minnesota	
Burnson, Anga Marie	<i>Sun Prairie</i>
B. A., University of Wisconsin	
Burrow, Herbert T.	<i>Beaver Dam</i>
B. A., University of Wisconsin	
Bussard, Alita Lois	<i>Milwaukee</i>
B. A., Lawrence College	
Bussewitz, Walter Richard	<i>Linden</i>
B. A., University of Wisconsin	
Butler, Lee Wright g	<i>Madison</i>
B. A., Simpson College	
Butz, Florence Julia	<i>Wilmette, Ill.</i>
B. A., Northwestern University	
Byrne, Margaret Jane	<i>Fitchburg</i>
B. A., University of Wisconsin	
Cadwallader, Laura Stanes	<i>Philadelphia, Pa.</i>
B. A., University of Wisconsin	
Cady, Grace Raymond	<i>Reedsburg</i>
B. A., University of Wisconsin	
Calvert, Gay Edna	<i>Sullivan, Ind.</i>
M. A., Indiana University	
Calvin, Everett Young	<i>Alliance, Ohio</i>
B. A., Mt. Union College	
Cameron, Hugh Albert	<i>Sylvania, Pa.</i>
B. A., Oberlin College	
Campbell, Wilfrid Gladstone	<i>Superior</i>
B. A., Macalester College, St. Paul	
Cantu, Abel g	<i>Brownsville, Texas</i>
B. A., William Jewell College	
Carpenter, Otto Frank g	<i>Weston, Ohio</i>
B. S., Ohio Northern University	
Carrier, Mary Esto	<i>Vinton, Iowa</i>
B. A., Knox College	
Carsner, Eubanks g	<i>Madison</i>
B. A., University of Texas	
Carter, James Treat	<i>Madison</i>
B. A., Oberlin College	
Caves, Reginald Eugene	<i>Hancock</i>
B. A., Lawrence College	

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Chickering, Arthur Merton Ph. B., Yale University	<i>Beloit</i>
Childress, Harvey Ernest B. S., Central Normal College	<i>Freedom, Ind.</i>
Childress, Leslie Ambrose B. A., Indiana State Normal	<i>Meccà, Ind.</i>
Childs, Edward Powells g B. S., Denison University	<i>Madison</i>
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Clark, Katharine B. A., Oberlin College	<i>Medina, Ohio</i>
Clark, Norris Parker B. A., Roanoke College	<i>Brunswick, Ohio</i>
Clarke, Bruce Walrath LL. B., University of Wisconsin	<i>Madison</i>
Clarke, Mary Fifield B. A., Brown University	<i>Centreville, R. I.</i>
Cleveland, Ewart B. A., University of Wisconsin	<i>Soldiers Grove</i>
Cleveland, William Roy g B. S., Kansas State Normal	<i>Madison</i>
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B. S., University of Arizona	
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B. A., University of Illinois	
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B. A., Earlham College	
Converse, Franklin Elmer	Beloit
B. L., University of Michigan	
Converse, Paul D.	Pittsburg, Pa.
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B. Lit., Stephens College, Texas	
Cook, Ruth Mary	Alma, Mich.
B. A., Alma College	
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B. A., Alleghany College	
Cooper, Grace Bernice	Walworth
B. A., Beloit College	
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B. A., Beloit College	
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B. S., Kansas State Agricultural College	
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B. S., Knox College	
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B. A., Vassar College	
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M. S., University of Wisconsin	
Crawford, Carroll Albert	Freeport, Ill.
B. S., Carthage College	
Creutz, Lester	Beaver Dam
B. A., University of Wisconsin	
Crocheron, Annette	Gadsden, Ala.
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B. A., Ripon College	
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Dewitz, Gertrude Marion	Rocky Ford, Colo.
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Du, Chuin	<i>Honan, China</i>
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Du Mez, Andrew Grover g	<i>Madison</i>
M. S., University of Wisconsin	
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Dunbar, Joseph Elias	<i>Bowers, Ind.</i>
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Dunkel, Arthur A.	<i>Phillips</i>
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Durfee, Winifred Hackley (Mrs.)	<i>Holland, Mich.</i>
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Du Shane, Donald	<i>Madison, Ind.</i>
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Dwyer, Ellen Frances	<i>Charleston, Ill.</i>
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Dyer, Margaret Brydie	<i>St. Louis, Mo.</i>
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Dyer, Mildred	<i>Des Moines, Iowa</i>
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Earhart, Franc Corrilla B. S., Lenox College	<i>Hopkinton, Iowa</i>
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Edwards, Edgar Matthew B. A., Franklin College of Indiana	<i>Elwood, Ind.</i>
Edwards, Gwendolyn Helen B. A., Western Reserve University	<i>Warren, Ohio</i>
Elliott, Mary Deborah Ph. B., De Pauw University	<i>Stockwell, Ind.</i>
Ellman, Frances Catherine M. A., University of Wisconsin	<i>Madison</i>
Elmendorf, Armin g B. S., University of Illinois	<i>Madison</i>
Elmer, Walter Edgar B. L., University of Wisconsin	<i>Hartford</i>
Elwell, Elizabeth B. A., University of Minnesota	<i>Minneapolis, Minn.</i>
Elwell, Mary Isabelle B. A., Carleton College	<i>Minneapolis, Minn.</i>
Ely, Elsie May B. A., Oberlin College	<i>Fayette, Ohio</i>
English, Elsie Mary B. A., Ohio Wesleyan University	<i>Delaware, Ohio</i>
Ernst, Carola Léonie	<i>Brussels, Belgium</i>
Erskine, Esther B. S., University of Missouri	<i>St. Louis, Mo.</i>
Estrem, Andrew Ph. D., Cornell University	<i>Red Wing, Minn.</i>
Evans, Dina Rees B. A., University of South Dakota	<i>Sturgis, S. Dak.</i>
Evans, Lora Belle B. A., University of Michigan	<i>Eau Claire, Mich.</i>
Eyestone, Walter Howard B. S., Cornell College	<i>Mt. Vernon, Iowa</i>
Faber, Marion Julia B. A., Leland Stanford Junior University	<i>Peoria, Ill.</i>
Fairbairn, Helen S. B. A., University of Wisconsin	<i>Madison</i>
Farwell, Helen Margaret B. A., Wellesley College	<i>Newton Center, Mass.</i>
Feasley, Noble Raymond B. A., Knox College	<i>Dallas City, Ill.</i>
Fehleisen, Minnie Catharine B. S., Coe College	<i>Boone, Iowa</i>
Felt, Alice Helen B. A., Knox College	<i>Galesburg, Ill.</i>
Ferris, Holmes Dunbar B. A., Beloit College	<i>Beloit</i>
Fields, Marjorie Ross B. A., Randolph-Macon College	<i>Shreveport, La.</i>

Filter, Raymond Otto	<i>Milwaukee</i>
M. A., University of Wisconsin	
Finnegan, Charles Robert g m	<i>La Valle</i>
B. A., Ripon College	
Finner, Fred Frank	<i>Dodge</i>
B. A., University of Wisconsin	
Finner, Paul Frederick g	<i>Madison</i>
M. A., University of Chicago	
Fletcher, Elizabeth Blair	<i>St. Louis, Mo.</i>
M. A., Washington University	
Fogle, David Edgar	<i>Georgetown, Ky.</i>
M. A., Harvard University	
Fonda, Clara Luella	<i>Austin, Texas</i>
B. A., University of Texas	
Fonda, Ethel Mary	<i>Austin, Texas</i>
B. A., University of Texas	
Foote, Lucy Dodds	<i>St. Louis, Mo.</i>
B. A., Park College	
Ford, Charles F.	<i>Edwardsville, Ill.</i>
B. A., Knox College	
Ford, Willard Stanley	<i>Sparta</i>
B. A., Lawrence College	
Foster, Guy Kenneth	<i>Youngstown, Ohio</i>
B. A., University of Missouri	
Fowble, George Albert	<i>Monterey, Ind.</i>
B. A., Earlham College, Indiana	
Fowler, Mary Lucile g	<i>Fond du Lac</i>
B. A., University of Wisconsin	
Francis, Harry Dalton	<i>Madison</i>
B. A., Beloit College	
Frear, Marguerite	<i>Washington, D. C.</i>
B. A., University of Wisconsin	
Freeman, Grace	<i>Aurora, Ill.</i>
B. A., University of Chicago	
Frick, Flora Margaret	<i>Indianapolis, Ind.</i>
M. A., Northwestern University	
Fritsch, Emily Shields	<i>Amsterdam, N. Y.</i>
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Froggatt, Lillian Mary	<i>Alberville</i>
B. A., University of Wisconsin	
Frost, Marion Nellie	<i>Grand Rapids, Mich.</i>
B. A., University of Michigan	
Fuchs, Gustave Otto	<i>Stanton, Nebr.</i>
B. A., University of Nebraska	
Fuller, Fannie Alberta	<i>Whitewater</i>
B. A., University of Wisconsin	
Fulmer, Henry L. g	<i>Batesburg, S. C.</i>
M. S., University of Wisconsin	
Furness, Margaret Louise	<i>Madison</i>
B. S., Northwestern University	
Gaddis, Birney Higgins	<i>Evansville</i>
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Gaffron, Martha Otelia	<i>Plymouth</i>
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Gardner, Max William g	<i>Madison</i>
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Gates, Harry Clarence	<i>Chattanooga, Tenn.</i>
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Gaytin, Catherine Lulu	<i>Beloit</i>
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Ge'sler, Clifford Franklin g	<i>Bangor</i>
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Givens, Mary Louise	<i>Fayette, Mo.</i>
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Glandon, Frances	<i>Mezico, Mo.</i>
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Glasier, Emma Belle	<i>Manitowoc</i>
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Goldthwaite, Margaret	<i>Marion, Ind.</i>
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Gronert, Theodore Gregory	<i>Prairie du Chien</i>
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Grover, Alice Mary	<i>Madison</i>
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Guild, Helen Gertrude	<i>Hiawatha, Kans.</i>
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Hansen, Alvin Harvey	<i>Madison</i>
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Hills, Thomas Lawrence g	<i>Burlington, Vi.</i>
M. S., University of Wisconsin	
Hipple, Walter John	<i>St. Louis, Mo.</i>
B. A., Princeton University	
Hively, Ethel Irene	<i>Alliance, Ohio</i>
B. A., Mt. Union College	
Hodges, Annie Newell	<i>Greensburgh, Ky.</i>
B. A., University of Kentucky	
Hodgson, Roberta g	<i>Athens, Ga.</i>
M. A., University of Wisconsin	
Hoffman, Ivan Martin	<i>St. Louis, Mo.</i>
B. A., Simpson College	
Hogrefe, Pearl	<i>Wichita, Kans.</i>
M. A., Kansas University	
Hohlfeld, Helen Minnie	<i>Madison</i>
B. A., University of Wisconsin	
Holden, Eugene Davenport	<i>Merrill</i>
B. S., University of Wisconsin	
Hollis, Harriet Frances	<i>Chicago, Ill.</i>
B. A., University of Chicago	
Homburg, Frederick	<i>Cincinnati, Ohio</i>
M. A., University of Wisconsin	

Hook, Maude Persis	<i>So. Milwaukee</i>
B. A., University of Wisconsin	
Hopkins, Edward Stanley g	<i>Vermillion, Can.</i>
B. S., University of Toronto	
Horner, Robert Messenger	<i>Sterling, Kans.</i>
M. A., University of Kansas	
Householder, Frederick Franklin	<i>Ames, Iowa</i>
B. A., University of Wisconsin	
Houseman, Harley Vernon	<i>Madison</i>
M. A., University of Indiana	
Howard, Neale Frederick g	<i>Madison</i>
B. S., University of Wisconsin	
Howe, J. Edwin	<i>Chrisney, Ind.</i>
B. A., Winona College	
Hoyt, Grace Elizabeth	<i>Madison</i>
M. A., University of Wisconsin	
Hudson, Nelle Grace	<i>Boscobel</i>
Ph. B., University of Wisconsin	
Huffman, Werden Dunroe	<i>Hartford City, Ind.</i>
B. A., Indiana University	
Hughes, Alice Ethel	<i>Portland, Ore.</i>
B. A., St. Mary's, Portland	
Hull, Clark Leonard g	<i>Madison</i>
M. A., University of Wisconsin	
Humphrey, Elizabeth	<i>Cincinnati, Ohio</i>
B. A., Western College	
Humphrey, Rufus Richard	<i>Thompsonville, Mich.</i>
B. Pd., Michigan State Normal	
Hunter, Charles Axtell	<i>Blue Rapids, Kans.</i>
B. S., Kansas State Agricultural College	
Hupp, Wilmette	<i>Slater, Mo.</i>
B. A., Stephens College, Columbia, Mo.	
Hurley, Robert Vernon	<i>Milton</i>
B. A., Milton College	
Hutchinson, John Lewis	<i>Pittsburg, Kans.</i>
B. S., Kansas Manuel Training Normal	
Hutchinson, Mark Eastwood	<i>Madison</i>
M. A., University of Nebraska	
Huth, Raymond William	<i>Watertown</i>
B. A., University of Wisconsin	
Huwaldt, Edward	<i>Randolph, Nebr.</i>
B. A., University of Nebraska	
Hwang, Lin g	<i>Honan, China</i>
B. S., Baldwin-Wallace College	
Hypes, George William	<i>Austed, W. Va.</i>
B. S., University of Illinois	
Ide, Herbert Paist	<i>Webster, S. Dak.</i>
B. A., Hamline University	
Inomata, Tsunao g	<i>Nagaoka, Japan</i>
B. A., Waseda University	
Ivins, Benjamin Franklin Price	<i>Kalamazoo, Mich.</i>
B. A., Valparaiso University	

Jackson, Bertha May	<i>Sandusky, Ohio</i>
B. S., Ohio State University	
Jackson, Jacob Hugh	<i>St. Louis, Mo.</i>
B. A., Simpson College	
Jacques, Marjorie	<i>Neillsville</i>
B. A., University of Wisconsin	
Jameson, Kate Wetzel (Mrs.)	<i>Madison</i>
M. A., University of Wisconsin	
Jamieson, Charline	<i>Marion, Ind.</i>
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Jenner, Louise May	<i>Evansville, Ind.</i>
B. S., University of Illinois	
Jennings, Beatrice	<i>St. Louis, Mo.</i>
B. A., Washington University	
Jennings, Dorothy	<i>St. Louis, Mo.</i>
B. A., Washington University	
Jerome, Harry g	<i>Madison</i>
M. A., University of Wisconsin	
Johnson, Carl	<i>Tyler, Minn.</i>
B. A., University of Minnesota	
Johnson, Ethel Dorothy	<i>Broken Bow, Nebr.</i>
B. A., University of Nebraska	
Johnson, Guy Arthur	<i>Ashland</i>
B. A., Northland College	
Johnson, Herbert Henry	<i>Pittsburgh, Pa.</i>
Ph. B., University of Wooster	
Johnson, Jorgen Ansten	<i>Arkdale</i>
B. A., St. Olaf College	
Johnson, M. Louise	<i>St. Charles, Minn.</i>
B. A., Carlton College	
Johnson, Nora Olive	<i>Bussy, Iowa</i>
B. A., Drake University	
Johnson, Russell L. I	<i>Madison</i>
B. A., University of Wisconsin	
Johnston, Margaret	<i>Burnt Prairie, Ill.</i>
B. A., Knox College	
Johnston, Roy Kenneth	<i>Brandon</i>
B. A., Lawrence College	
Jones, Fred Reuel g	<i>Madison</i>
M. S., University of Wisconsin	
Jones, Martha	<i>Terrace Park, Ohio</i>
B. L., University of Cincinnati	
Jones, Richard Uriah	<i>Madison</i>
M. A., University of Wisconsin	
Jones, Silas	<i>Eureka, Ill.</i>
B. A., Eureka College	
Joslin, Rose Brigham	<i>Evansville, Ind.</i>
M. A., De Pauw University	
Junkman, Glen Perry	<i>Wabeno</i>
Ph. B., University of Wisconsin	
Kahn, J. Ottillie	<i>Cleveland, Ohio</i>
M. A., University of Missouri	

Karlson, Erik Hjalmar g	<i>Madison</i>
B. A., Augustana College	
Kelley, Anne Bassett	<i>Waupun</i>
B. A., Beloit College	
Kellogg, Erma Marguerite	<i>Chicago, Ill.</i>
B. S., University of Chicago	
Kelly, Clara Mae	<i>Cape Girardeau, Mo.</i>
B. S., Illinois Womans College	
Kelley, Esther Elizabeth	<i>Madison</i>
B. A., University of Wisconsin	
Kendall, Calla Frances	<i>Byron, Minn.</i>
B. A., Carlton College	
Kennebrew, Elizabeth Billups	<i>Columbus, Miss.</i>
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Kenngott, Alfred	<i>St. Louis, Mo.</i>
M. A., Washington University	
Kent, Henry Thomas, Jr.	<i>Clifton Heights, Pa.</i>
M. A., Princeton University	
Ketcham, Lucia	<i>Indianapolis, Ind.</i>
B. A., Lake Erie College	
Keysor, Harold Clark	<i>Kirkwood, Mo.</i>
B. A., Washington University	
Kidder, Charles Joseph	<i>Madison</i>
B. A., University of Wisconsin	
Kidwell, Helen	<i>Columbus, Ohio</i>
B. A., Ohio State University	
Kimball, Florence Belle	<i>Dunbar, Pa.</i>
B. A., Hood College	
King, Mary Louisa	<i>Ironwood, Mich.</i>
B. A., University of Wisconsin	
Kinney, Genieve	<i>Lawrence, Kans.</i>
B. A., University of Kansas	
Kinney, Samuel Marks g	<i>Madison</i>
B. A., Oberlin College	
Kirk, Edna	<i>Hutsonville, Ill.</i>
B. A., University of California	
Klem, Mary Jeanette	<i>St. Louis, Mo.</i>
B. A., Washington University	
Koenig, Alfred Edmund	<i>Minneapolis, Minn.</i>
M. A., University of Minnesota	
Kremer, Anna Margaret	<i>Detroit, Mich.</i>
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Kremers, Roland Edward	<i>Madison</i>
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Krotzer, Fred Wilhelm	<i>Milwaukee</i>
B. S., Kansas State University	
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B. A., MacAlester College	
Kumlien, Wendell Frichiof	<i>Madison</i>
B. A., Lawrence College	
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Kunkel, Annie Laura	<i>Fond du Lac</i>
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Kunz, Herman W.	<i>Glendale, Ohio</i>
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Kyper, Guy D.	<i>So. Milwaukee</i>
B. S., Tri State College	
Ladd, William Stanton	<i>Madison</i>
B. S., University of Illinois	
Lagemann, Alfred Frederic	<i>Chamois, Mo.</i>
B. S., University of Missouri	
Lammers, Minnie Bertha	<i>Madison</i>
B. A., Indiana University	
Lane, May Rogers	<i>Cambridge, Mass.</i>
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Lang, Edith Lydia	<i>Sullivan, Ind.</i>
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Langenhan, Henry August g	<i>Madison</i>
M. S., University of Wisconsin	
Langworthy, Amy Eunice	<i>Leavenworth, Kans.</i>
B. A., University of Kansas	
Lasley, John Sidney	<i>Kansas City, Mo.</i>
Pd. B., Missouri State Normal	
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Law, Mabel Elizabeth	<i>Mercer, Pa.</i>
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Lear, John Emery	<i>Northfield, Vt.</i>
E. E., Texas Agricultural and Mechanical College	
Ledbetter, Mary	<i>Farmington, Mo.</i>
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Lee, Henry Gustave	<i>Madison</i>
B. A., University of Wisconsin	
Lee, Hunyet	<i>Batavia, Iowa</i>
E. M., Colorado School of Mines	
Leedy, John Wentworth	<i>Madison</i>
M. S., University of Wisconsin	
Leiser, Frederick Oscar	<i>Madison</i>
M. A., University of Wisconsin	
Lewis, Frank C.	<i>La Crosse</i>
B. S., Kansas State College	
Lewis, Jennie	<i>Sandusky, Ohio</i>
B. A., Ohio Wesleyan University	
Ley, Henrietta Marie	<i>De Pere</i>
B. A., Lawrence College	
Lide, Claudia Clayton	<i>St. Louis, Mo.</i>
B. A., Washington University	

Liebmann, Lotta Bee	<i>Geneva, Ill.</i>
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Lightcap, Earl Kempthorne	<i>Madison</i>
Ph. B., University of Wisconsin	
Lincoln, Mildred Ella	<i>Rochester, N. Y.</i>
B. A., Syracuse University	
Lind, Amelia Mary	<i>Madison</i>
B. A., Indiana State University	
Lind, Frances Clara	<i>Madison</i>
Ph. B., University of Wooster	
Lins, Hildegard Margaret	<i>Spring Green</i>
B. A., University of Wisconsin	
Litchen, Ruth Eleanor	<i>Leavenworth, Kans.</i>
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Logan, David M.	<i>Tahlequah, Okla.</i>
B. A., University of Oklahoma	
Logan, Leonard	<i>Tahlequah, Okla.</i>
B. A., University of Oklahoma	
Logan, Milon Grout	<i>Louisville, Ky.</i>
B. S., Dartmouth College	
Long, Charles Ellsworth	<i>Charleston, Ill.</i>
B. A., Lake Forest College	
Lorch, Augusta Christine	<i>Middleton</i>
B. A., University of Wisconsin	
Loughlin, Rosemary g	<i>Madison</i>
B. A., State University of Iowa	
Lowe, Cecil E.,	<i>Madison</i>
B. A., Washburn College	
Lowry, Ralph Brownlee	<i>Lowryville, S. C.</i>
B. S., Clemson College	
Lucas, Ernest Leslie	<i>Kosciusko, Miss.</i>
B. S., Mississippi Agricultural and Mechanical College	
Luck, George Felton	<i>Concord, Tenn.</i>
B. S., Georgia School of Technology	
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B. S., North Dakota Agricultural College	
Lutes, Olin Silas	<i>Rochester, Minn.</i>
B. A., Ohio University	
Lynch, Lummie	<i>Robertsville, Mo.</i>
B. A., Missouri University	
McAdams, Edward E.	<i>Bryan, Texas</i>
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MacCaffertry, Louellen	<i>St. Joseph, Mo.</i>
B. S., University of Chicago	
McCarter, John K.	<i>Odon, Ind.</i>
B. A., Indiana State Normal	
McCarty, Leslie Combes	<i>Preston, Minn.</i>
B. A., University of Indiana	
McCaughtry, Esther Lucille	<i>Carthage, Mo.</i>
B. A., Drury College	

McCauley, Katharine Lay	<i>Highland Park, Ill.</i>
B. A., Bryn Mawr College	
McClintock, Margaret	<i>Chicago, Ill.</i>
B. S., University of Illinois	
McCordic, Ada	<i>Groton, S. Dak.</i>
M. A., University of Wisconsin	
McCorkel, Henry James	<i>Pittsburgh, Pa.</i>
B. S., Carnegie Institute of Technology	
McCormick, Francisca Helen	<i>Yankton, S. Dak.</i>
B. A., University of South Dakota	
McCormick, Pearl Marie	<i>Yankton, S. Dak.</i>
B. A., Yankton College	
McCoy, Susan	<i>Des Moines, Iowa</i>
B. A., University of Chicago	
McCoy, Susan Gertrude	<i>Carthage, Mo.</i>
B. S., University of Missouri	
McCradie, Robert D. m	<i>Grandin, N. Dak.</i>
B. A., Fargo College	
McCreery, James Wesley	<i>Columbia, Mo.</i>
B. S., University of Missouri	
McCully, Harry McKee	<i>Pittsburgh, Pa.</i>
B. S., Carnegie Institute of Technology	
McElfresh, Gertrude Elizabeth, (Mrs.)	<i>Corvallis, Ore.</i>
B. A., Cornell University	
McFetridge, Clarissa May	<i>Oshkosh</i>
B. A., Carroll College	
McGill, Helen Margaret	<i>Montezuma, Iowa</i>
Ph. B., Grinnell College	
McGrath, Robert Timothy	<i>Madison</i>
Ph. B., University of Wisconsin	
MacGregor, Ford H. g	<i>Madison</i>
M. A., University of Wisconsin	
McKean, Harry Willis	<i>Kansas City, Kans.</i>
B. A., Westminster College	
McKenney, Howard Lathrop	<i>Auburn, Ind.</i>
B. S., Valparaiso University	
McKeough, Michael John	<i>West Deptre</i>
B. A., St. Norbert's College	
McKinley, Lorenzo Ellis	<i>Van Wert, Ohio</i>
Pd. B., Ohio Northern University	
McKinney, Edward Kirk	<i>West Newton, Ind.</i>
B. A., Earlham College	
MacKinney, Loren Carey	<i>Milwaukee</i>
B. A., Lawrence College	
McKittrick, Bess Jane	<i>Wilson, Kans.</i>
B. A., University of Kansas	
McLaughlin, Margaret Loretta	<i>Indianapolis, Ind.</i>
Ph. B., University of Chicago	
McMahon, Alma Louise (Mrs.)	<i>Madison</i>
M. A., University of Wisconsin	
McMurry, Donald LeCrone	<i>Nashville, Tenn.</i>
M. A., University of Wisconsin	

McNeel, James Herbert	<i>Beloit</i>
B. A., University of Wisconsin	
McNutt, William Charles	<i>St. Louis, Mo.</i>
LL. B., Benton College of Law	
McPheeters, William Henry	<i>College Station, Texas</i>
B. S., Oklahoma Agricultural and Mechanical College	
MacQueen, Donald Windsor	<i>College Station, Ark.</i>
B. A., Centre College of Kentucky	
MacWilliams, Lucile	<i>Meridian, Miss.</i>
B. S., Mississippi Industrial Institute and College	
Macdonnell, Carey Ryker	<i>Windsor, Mo.</i>
B. A., Hanover College, Hanover, Indiana	
Macklin, Theodore	<i>Manhattan, Kans.</i>
B. S., Iowa State College	
Madden, Elwood C.	<i>Cherokee, Okla.</i>
B. A., University of Oklahoma	
Madson, Nina Augusta	<i>Ames, Iowa</i>
B. S., Iowa State College	
Major, David Maggard	<i>Madison</i>
B. A., Polytechnic College	
Malone, Julian Yerkes	<i>Ripon</i>
B. A., Ripon College	
Mangelsdorf, Bertha Wilhelmina	<i>Atchison, Kans.</i>
B. S., Kansas State Agricultural College	
Marberry, James Oscar	<i>Robinson, Ill.</i>
B. A., Ewing College	
Marble, Elma Anne	<i>Girard, Ohio</i>
B. A., Western Reserve University	
Markham, Harriet	<i>Rosedale, Kans.</i>
B. A., Washburn College	
Marshall, Irene	<i>Lead, N. Dak.</i>
B. A., Simpson College	
Marshall, Marion Genevieve	<i>Mandan, S. Dak.</i>
B. A., University of Wisconsin	
Martin, Harry Edwin	<i>Alliance, Ohio</i>
M. A., University of Wisconsin	
Martindale, Katherine	<i>La Crosse</i>
B. A., Smith College	
Mason, Elizabeth Browning	<i>Washington, D. C.</i>
B. A., Wellesley College	
Mason, Harry Wickcliffe	<i>Lafayette, Ind.</i>
B. A., De Pauw University	
Mason, Thomas Alfred	<i>Moorhead, Minn.</i>
B. A., St. Olaf College	
Mathie, Edward Joseph	<i>Madison</i>
B. A., University of Wisconsin	
Matson, Mamie	<i>Evansville</i>
B. S., South Dakota State College	
Mattson, Olive May	<i>Chicago, Ill.</i>
B. A., University of Illinois	
Maxson, Mabel	<i>Milton Junction</i>
M. A., University of Wisconsin	

May, Phyllis Crawford	<i>Platterville</i>
B. A., University of Wisconsin	
Meador, Mildred	<i>Cincinnati, Ohio</i>
B. A., University of Cincinnati	
Meadows, Roy Nathan	<i>Madison</i>
B. A., Beloit College	
Meek, Joseph Henry	<i>Dinwiddie, Va.</i>
B. A., Roanoke College	
Melnikow, Henry Playman	<i>Milwaukee</i>
B. A., University of Wisconsin	
Melrose, James Albert	<i>Ironwood, Mich.</i>
B. A., Hamilton College, New York	
Mendham, Nelly Maude	<i>Kirkwood, Mo.</i>
B. A., Washington University	
Merkelbach, Marie Louise	<i>Milwaukee</i>
M. A., University of Wisconsin	
Mersereau, Edward Burkhardt	<i>Beaver Dam</i>
Ph. B., Baylor University	
Mewaldt, Nathanael Herman	<i>Kaukauna</i>
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Mickey, Mary Emily	<i>Leavenworth, Kans.</i>
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Miller, Helen Scribner	<i>Grinnell, Iowa</i>
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Miller, Jean	<i>East Orange, N. J.</i>
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Miller, Maurice Ethelred	<i>Holly Springs, Miss.</i>
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Millikan, Ray Spencer	<i>Cassville</i>
B. A., Indiana University	
Milne, William	<i>Merrill</i>
Ph. B., University of Wisconsin	
Minsart, Anton Peter	<i>Green Bay</i>
B. A., University of Wisconsin	
Mitchell, Halcyon Margaret	<i>Gaston, Ind.</i>
B. A., Western College for Women	
Mitchell, Morton Leslie	<i>Indianola, Ind.</i>
B. A., Simpson College	
Mix, Morton Earl	<i>Alfred, N. Y.</i>
Ph. B., Alfred University	
Mohaupt, Arthur George g	<i>Milwaukee</i>
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Mohr, Walter Harrison	<i>Cincinnati, Ohio</i>
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Moore, Milton Donaldson	<i>Washington, D. C.</i>
B. A., George Washington University	
Moorhouse, Harold William	<i>Stillwater, Okla.</i>
B. A., Beloit College	
Morgan, De Witt Schuyler	<i>Madison</i>
B. A., Henry Kendall College	
Morgan, John William	<i>Madison</i>
B. A., Richmond College	

Morgan, Samuel Lewis	<i>Henderson, N. C.</i>
B. A., Richmond College	
Morris, Caroline Ruth	<i>Oshkosh</i>
B. A., University of Wisconsin	
Morris, Clara Evelyn	<i>Boulder, Colo.</i>
B. A., Colorado Teachers' College	
Morris, Delia	<i>Pekin, Ind.</i>
B. Pd., Valparaiso University	
Morris, Florence Janie	<i>Cambria</i>
B. A., Carroll College	
Morrissy, Elizabeth	<i>Milwaukee</i>
B. A., Beloit College	
Morrow, John Richardson	<i>Pittsburgh, Pa.</i>
B. A., Washington and Jefferson College	
Morse, Carrie Zettie	<i>Ripon</i>
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M. A., University of Chicago	
Mueller, Johanna Caroline	<i>Indianapolis, Ind.</i>
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Muench, Alice Frances	<i>St. Louis, Mo.</i>
B. A., Washington University	
Murphy, Ray V.	<i>Bloomington, Ill.</i>
B. S., Illinois Wesleyan	
Murphy, Walter Henry	<i>St. Paul, Minn.</i>
B. A., University of Wisconsin	
Murray, Frances Josephine	<i>Madison</i>
B. A., University of Wisconsin	
Murry, Grace M.	<i>Ridgeway, Mo.</i>
Pd. B., Warrensburg State Normal, Missouri	
Musselman, L. J.,	<i>Camden, Ind.</i>
B. A., Manchester College	
Myers, Harold Bunce	<i>Janesville</i>
M. D., Western Reserve University	
Myrland, Ruth Henrietta	<i>Madison</i>
B. A., University of Wisconsin	
Nafe, Gertrude	<i>Denver, Colo.</i>
B. A., University of Colorado	
Nash, Francis R.	<i>St. Croix Falls</i>
Ph. B., University of Wisconsin	
Nebel, Catherine Elizabeth	<i>Milwaukee</i>
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Neller, Joseph Robert	<i>Austin, Minn.</i>
M. S., University of Minnesota	
Nelson, Stacy Elijah	<i>Chattanooga, Tenn.</i>
B. A., University of Chattanooga	
Nelson, Victor Emanuel g	<i>Madison</i>
M. S., University of Wisconsin	
Neprud, Maude Eunice	<i>La Crosse</i>
B. A., University of Wisconsin	

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B. S., Milwaukee Downer College	
Newman, Porter Joseph	<i>Manhattan, Kans.</i>
M. S., Franklin College	
Newton, Lucy Cogar	<i>Ferguson, Mo.</i>
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Nichols, Merle Starr g	<i>Madison</i>
B. S., University of Wisconsin	
Nicholson, Caroline L.	<i>Richmond, Ind.</i>
B. A., Earlham College	
Nicholson, Eugene Nesbit	<i>Dahlanega, Ga.</i>
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Ninman, Herman John g	<i>Belle Plaine</i>
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Oldfather, Charles Henry	<i>Hanover, Ind.</i>
B. A., Hanover College	
Oldham, Stanley Reginald	<i>Pittsfield, Me.</i>
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Olds, Helena Mae	<i>New Paltz, N. Y.</i>
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Olmsted, Ruth Harwood	<i>Washington, D. C.</i>
B. A., Mt. Holyoke College	
Olson, Agnes Mildred	<i>Galesburg, Ill.</i>
B. A., University of Illinois	
Olson, Kenneth E.	<i>Ashland</i>
B. A., Northland College	
O'Malley, Agnes Elizabeth g	<i>Madison</i>
B. A., University of Wisconsin	
Onsgard, Henry	<i>Aberdeen, S. Dak.</i>
B. A., Luther College	
Oosterhous, Alfred George	<i>Pewaukee</i>
B. A., Lawrence College	
O'Rourke, Lawrence J.	<i>Appleton</i>
B. A., Lawrence College	
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Osborn, George Morris	<i>Clarksburg, W. Va.</i>
B. S., West Virginia University	
Osborne, Ella Maxwell	<i>Anderson, Ind.</i>
B. A., Indiana University	
Osler, Rebecca Tyler	<i>Pensauken, N. J.</i>
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Osmond, Alice Josephine	<i>Webster Groves, Mo.</i>
B. A., University of Missouri	
Ostlund, Harry John	<i>Winnebago, Minn.</i>
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Palmer, Frances Angeline	<i>Winnebago, Minn.</i>
B. A., University of Wisconsin	
Parker, Arlene	<i>Sandersville, Miss.</i>
B. S., Mississippi Industrial Institute and College	
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B. L., Ohio Wesleyan University	
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M. S., University of Wisconsin	
Pate, Henrietta	<i>Greenwood, Miss.</i>
B. E., Centenary College	
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M. A., University of Wisconsin	
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B. A., University of Iowa	
Penberthy, Mary Cora	<i>Cleveland, Ohio</i>
B. A., Oberlin College	
Peoples, Walter	<i>Cincinnati, Ohio</i>
B. A., Juniata College	
Peterson, Francis Edwin	<i>Fergus Falls, Minn.</i>
M. A., University of Wisconsin	
Peterson, Irene Mitchell	<i>Michigan City, Ind.</i>
B. A., Rockford College	
Petterson, Marie Dorothea	<i>Appleton</i>
B. S., Northwestern University	
Pettibone, Nile Edward	<i>Bellevue, Ohio</i>
B. A., Oberlin College	
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Philipp, Ernest Joseph	<i>Milwaukee</i>
Ph. B., University of Wisconsin	
Phillips, Albert David	<i>Madison</i>
B. S., University of Wisconsin	
Phillips, Henry L.	<i>St. Louis, Mo.</i>
B. S., University of Pennsylvania	
Picken, Mae Evangeline	<i>Ellensburg, Wash.</i>
B. S., Teachers' College, Columbia University	
Pickett, Roswell Covert	<i>Madison</i>
B. S., University of Wisconsin	
Pierce, David Harry	<i>Dubuque, Iowa</i>
B. S., St. Lawrence University	
Pierson, Merle Dunning	<i>Milwaukee</i>
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Pietonpol, William Brasser	<i>Madison</i>
M. A., University of Wisconsin	
Piggins, Ralph Sproule g	<i>Milwaukee</i>
B. A., University of Wisconsin	

Pixler, John Van Fleet	<i>Rockford, Ohio</i>
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Pleasant, Eunice	<i>Kansas City, Mo.</i>
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Pomeroy, Mabel Frances	<i>Madison</i>
B. A., University of Wisconsin	
Ponsler, Rolla	<i>Flatrock, Ind.</i>
B. A., Indiana State Normal	
Porter, Annie Augusta	<i>Excelsior, Minn.</i>
B. S., University of Wisconsin	
Post, Kate	<i>Madison</i>
B. A., University of Wisconsin	
Post, Robert Lewis	<i>Madison</i>
M. S., Iowa State College	
Powell, Bernice	<i>Dixon, Ill.</i>
B. A., University of Illinois	
Pray, Perry Sheldon	<i>Memphis, Tenn.</i>
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B. A., Northwestern University	
Preston, William Hall	<i>Mausion</i>
B. A., Ripon College	
Purnell, Ruth	<i>West Chicago, Ill.</i>
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B. A., Oxford University	
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B. A., Lawrence College	
Radke, Etta Ida	<i>Madison</i>
B. A., University of Wisconsin	
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B. A., Beloit College	
Raresheid, Lillian May	<i>Cincinnati, Ohio</i>
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Rath, William David	<i>Almond</i>
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Reddy, Charles Steven	<i>Madison</i>
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Redford, Mattie Florence	<i>Holden, Mo.</i>
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Reinhard, Emilie Sophie B. A., Goucher College	<i>Baltimore, Md.</i>
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Roxas, Manuel Luz	<i>Lipa, P. I.</i>
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B. A., De Pauw University	
Rummel, Leo Leonard	<i>West Depere</i>
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Saltus, Charles Napoleon	<i>Sterling, Colo.</i>
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Schlater, Edith Louise	<i>Anderson, Ind.</i>
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Schuler, Margaret Mary	<i>Milwaukee</i>
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Schuster, Matilda Katherine	<i>Lakewood, Ohio</i>
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Scott, Walter Alexander	<i>Elmwood</i>
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Scott, William Ellison	<i>Two Harbors, Minn.</i>
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Seifert, Shirley Louise	<i>St. Louis, Mo.</i>
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Shelton, Evalyn	<i>Canton, Ohio</i>
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Shelton, Margaret	<i>Rhinclander</i>
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Shepherd, Thomas Dudley	<i>Wellesley Hills, Mass.</i>
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Sherwood, Clara Marie	<i>Madison</i>
B. A., University of Wisconsin	
Shimp, Samuel	<i>Alliance, Ohio</i>
B. S., Mt. Union College	
Shine, Mary Lambert	<i>Newport, Ky.</i>
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Shultz, Mary Isabel	<i>Logansport, Ind.</i>
B. A., Wilson College	
Simes, Blanche Dougherty (Mrs.)	<i>Missoula, Mont.</i>
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Simkins, Don Carleton	<i>Kenton, Ohio</i>
B. S., Denison University	
Simpson, Herbert Downs	<i>Madison</i>
M. A., Princeton University	
Simpson, Laura Elizabeth	<i>Lake City, Minn.</i>
B. S., Carleton College	
Simpson, Margaret	<i>Fairmont, Minn.</i>
B. A., Carleton College	
Simpson, Welton Fletcher C.	<i>Kent, Ohio</i>
B. A., Mt. Union College	
Sisler, Della Jarrett	<i>Emporia, Kans.</i>
B. L. S., University of Illinois	
Sister Marie Lillian g	<i>Sinsinawa</i>
B. A., St. Clara College	
Sister Mary Camillus	<i>Sinsinawa</i>
B. A., Washington University	
Sister Mary Coronata	<i>Sinsinawa</i>
B. A., Washington University	
Small, Pearl McAllister	<i>Madison</i>
B. A., Radcliffe College	

Smiley, Virgil Dowe	<i>Franklin, Ind.</i>
B. S., Franklin College of Indiana	
Smith, Burton L.	<i>Fargo, N. Dak.</i>
B. S., Iowa Wesleyan College	
Smith, Caroline Belle	<i>Iowa City, Iowa</i>
B. A., University of Iowa	
Smith, Cortes Everett	<i>Ashland</i>
B. A., Redfield College	
Smith, Edna Maude	<i>Smith Center, Kans.</i>
B. A., University of Kansas	
Smith, Elizabeth Mary	<i>Milwaukee</i>
B. A., University of Wisconsin	
Smith, Floy Rose (Mrs.)	<i>Madison</i>
B. A., University of Wisconsin	
Smith, Frances	<i>Pleasanton, Kans.</i>
M. A., University of Kansas	
Smith, Frances Louise	<i>Marinette</i>
B. A., University of Wisconsin	
Smith, Georgianna	<i>Evanston, Ill.</i>
B. S., Northwestern University	
Smith, Gilbert Brown Lorenzo	<i>Ellicottville, N. Y.</i>
M. A., University of Wisconsin	
Smith, Howard Clifton	<i>Oshkosh</i>
M. A., Indiana University	
Smith, Jessica Minerva	<i>Wichita, Kans.</i>
B. A., Kansas State Normal School	
Smith, Norman Leslie	<i>Bisbee, N. Dak.</i>
B. A., University of North Dakota	
Smith, Paul Tuicher	<i>Lafayette, Ind.</i>
B. A., De Pauw University	
Smith, Stephanie	<i>River Falls</i>
B. A., Lawrence College	
Smith, Walter Forrest	<i>Marshfield</i>
B. S., Knox College	
Smith, Winfield S.	<i>Madison</i>
B. S., University of Wisconsin	
Snodgrass, Lenore Katherine	<i>Indianola, Iowa</i>
B. A., Simpson College	
Snyder, George Brady	<i>Pittsburgh, Pa.</i>
B. S., Pennsylvania State College	
Sobel, Bernard	<i>Lafayette, Ind.</i>
B. S., Purdue University	
Solomon, Margaret	<i>Chicago, Ill.</i>
B. A., Northwestern University	
Soupart, Sylvia Josephine	<i>Lafayette, Ind.</i>
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Soutar, Richard Gray	<i>Madison</i>
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B. S., Hanover College	
Speicher, Paul g	<i>South Bend, Ind.</i>
B. A., Northwestern College	

Sperle, Diana Henryetta	<i>Macfarland</i>
B. A., University of Wisconsin	
Spillard, Sarah Virginia	<i>Cincinnati, Ohio</i>
B. L., University of Cincinnati	
Spilman, Louise	<i>Cincinnati, Ohio</i>
B. A., University of Cincinnati	
Spooner, Lucia Claire	<i>Superior</i>
Ph. B., University of Wisconsin	
Spore, Jessie Elnora	<i>Oberlin, Ohio</i>
B. A., Oberlin College	
Sprague, Ada Mabel	<i>Des Moines, Iowa</i>
Ph. B., Grinnell College	
Sprague, Mildred Statira	<i>Des Moines, Iowa</i>
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Springsteed, Clara B.	<i>Albany, N. Y.</i>
B. A., Mt. Holyoke College	
Starbird, Myrtle Irene	<i>Chicago, Ill.</i>
B. A., University of Chicago	
Stauffer, Ruth M.	<i>Washington, D. C.</i>
B. A., Mt. Holyoke College	
Stavrum, Edwin Richard	<i>Madison</i>
B. A., University of Wisconsin	
Steiner, Agnes Wallace	<i>Catact, Ind.</i>
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Stephens, Charles Robert	<i>Syracuse, N. Y.</i>
B. A., University of Rochester	
Steven, John Boardman	<i>Madison</i>
LL. B., Georgetown University	
Stewart, James Kidder	<i>Webster, S. Dak.</i>
B. A., University of Kansas	
Stewart, Theodosia	<i>Madison</i>
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B. A., Hiram College	
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B. A., University of Wisconsin	
Stonebraker, Ernest Porterfield	<i>Steubenville, Ohio</i>
B. S., Muskingum College	
Stoner, Edward Norris	<i>Ladoga, Ind.</i>
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Storr, Albert Miller	<i>Fl. Thomas, Ky.</i>
B. S., University of Wisconsin	
Straw, Nellie Leonara	<i>Wheaton, Ill.</i>
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Talbur, Florence Margaret	<i>Greencastle, Ind.</i>
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Tiernan, William Lawrence	<i>Edgerton</i>
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Tippet, Walter Pierson	<i>Appleton</i>
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Trilling, Mildred Frank	<i>Madison</i>
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Webster, Hattie Edith	<i>River Falls</i>
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Webster, Maud	<i>Sandwich, Ill.</i>
B. S., Ohio Wesleyan University	

Weeks, Mary Elvira	<i>Marseilles, Ill.</i>
M. A., University of Wisconsin	
Weilbrenner, Marie	<i>Bellefontaine, Ohio</i>
B. A., Wittenberg College	
Weingartner, Harry Albert	<i>Wabeno</i>
B. S., University of Wisconsin	
Weisman, Charles	<i>New York, N. Y.</i>
Ph. D., Columbia University	
Welch, Arnon Wallace	<i>East Orange, N. J.</i>
M. A., University of Wisconsin	
Weldon, Myrtle Margerite	<i>Rockford, Ill.</i>
B. A., Rockford College	
Wentz, Arno Edward	<i>Plymouth</i>
B. A., Lawrence College	
Werkmeister, Marie K.	<i>Evanston, Ill.</i>
B. S., University of Chicago	
Wessinger, John Hoy	<i>Lexington, S. C.</i>
B. S., Clemson Agricultural College	
West, Frank Henry	<i>Madison</i>
B. A., Northwestern University	
West, Mary Herold	<i>St. Louis, Mo.</i>
B. A., Washington University	
Westwick, Bella Elizabeth	<i>Galena, Ill.</i>
B. A., Northwestern University	
Wetmore, Mary Rhoda	<i>Madison</i>
M. D., University of Michigan	
Weyer, Stephen Morris	<i>Ainsworth, Nebr.</i>
B. S., Hastings College	
Whaley, Irene Grafton	<i>Flemingsburg, Ky.</i>
B. A., Vassar College	
Whitaker, Berry McClure	<i>Anderson, Ind.</i>
B. A., Indiana University	
White, Allace Seaver	<i>Lac du Flambeau</i>
M. D., George Washington University	
White, Elizabeth Brett	<i>Gettysburg, Pa.</i>
B. A., Cornell University	
White, Henry Ellis	<i>Comer, Ky.</i>
B. S., University of Wisconsin	
White, Horace Loring g	<i>Madison</i>
M. A., Columbia University	
Whitehouse, Herbert g	<i>Markesan</i>
B. A., Lawrence College	
Whiteside, Horace Eugene	<i>Richmond, Ind.</i>
B. A., University of Chicago	
Whiting, Edith Marguerite	<i>Marion, Ohio</i>
B. A., Oberlin College	
Whitworth, Ethel C.	<i>Cleveland, Ohio</i>
B. A., Western Reserve University	
Whitworth, Olive M.	<i>E. Cleveland, Ohio</i>
B. A., Western Reserve University	
Wiebe, Herman H.	<i>Madison</i>
M. A., University of Wisconsin	

Wilber, Hazel Elizabeth Ph. B., University of Wisconsin	<i>Galesville</i>
Wild, Julianna Marie Ph. B., University of Chicago	<i>Chicago, Ill.</i>
Wildasin, Irma Susan B. A., Cornell College	<i>Wilton, Iowa</i>
Williams, Alene B. A., University of Chicago	<i>Chicago, Ill.</i>
Williams, Anne Frances B. A., University of Wisconsin	<i>Madison</i>
Williams, Caryl Rockwood B. A., University of Wisconsin	<i>Viroqua</i>
Williamson, Robert Crosier g B. A., University of Wisconsin	<i>Madison</i>
Wilson, Cozymine M. A., Stanford University	<i>Collinsville, Ill.</i>
Wilson, Ethel May M. A., Vanderbilt University	<i>Conway, Ark.</i>
Witte, Edwin Emil B. A., University of Wisconsin	<i>Madison</i>
Wittman, Gerda P. B. A., Lawrence College	<i>Merrill</i>
Wolf, Edwin Fay B. S., Central Holiness University	<i>University Park, Iowa</i>
Wood, Frederick g B. A., University of Wisconsin	<i>Madison</i>
Wood, Louise B. A., Smith College	<i>St. Louis, Mo.</i>
Wood, Waldo Emerson g B. A., Central Normal College	<i>Michigantown, Ind.</i>
Woodworth, Clyde Melvin g M. S., University of Wisconsin	<i>Madison</i>
Yeager, William Allison B. A., Ursinus College	<i>Phoenixville, Pa.</i>
Yen, Leeching B. A., St. John's University	<i>Shanghai, China</i>
Young, Charles Edmund Ph. D., University of Wisconsin	<i>Beloit</i>
Young, Kwang Pi g M. S., University of Wisconsin	<i>Tientsin, China</i>
Young, Robert Vivian g B. A., Ripon College	<i>Beaver Dam</i>
Young, Wilmer J. B. S., Haverford College	<i>Springfield, Iowa</i>
Young, Vive Hall Ph. D., University of Wisconsin	<i>Madison</i>
Yui, Stewart Erb Shuin B. A., Boone University, Wuchang, China	<i>Wuchang, China</i>
Zillmer, Helen Jane g m B. A., University of Wisconsin	<i>Milwaukee</i>
Zimmermann, Robert Paul B. A., University of Illinois	<i>Chilton, Texas</i>
Zurawski, Helen Florence Ph. B., University of Chicago	<i>Chicago, Ill.</i>

UNDERGRADUATES AND TEACHERS

College of Letters and Science

Aaten, Georgine van	<i>Des Moines, Iowa</i>
Aardal, Anderson Albert	<i>Moorehead, Minn.</i>
Abbott, Harry Franklin	<i>Paragon, Ind.</i>
Adams, Adelaide Angela l s	<i>Madison</i>
Adams, Charles Clarence	<i>Depere</i>
Adams, Edith Augusta	<i>Auburn, Me.</i>
Adams, Louise	<i>Waukesha</i>
Adams, Lulu	<i>Mount Hope</i>
Addams, William, Jr.	<i>Cynthiana, Ky.</i>
Adler, Erna	<i>New York City, N. Y.</i>
Adler, Philip Abrams l s	<i>Madison</i>
Allen, L. Kate	<i>Minneapolis, Minn.</i>
Allison, Alma l s	<i>Jasper, Mo.</i>
Allison, Dorothy Webster	<i>Oak Park, Ill.</i>
Allison, Floyd Cornelius	<i>Evansville, Ind.</i>
Altendorf, Florenz George	<i>Madison</i>
Altpeter, Mabel Gerdena	<i>Chicago, Ill.</i>
Alvord, Ellsworth Chapman l s, l	<i>Washburn</i>
Ames, Walter Ray l s	<i>Madison</i>
Anderson, Alf Erling	<i>Stevens Point</i>
Anderson, Clifford Norman	<i>Scandinavia</i>
Anderson, Elizabeth Neely	<i>Madison</i>
Anderson, Forrest	<i>Madison</i>
Anderson, Harriet E.	<i>Louisville, Ky.</i>
Anderson, John Willard	<i>Galesburg, Ill.</i>
Andres, Paul Hall	<i>Memphis, Mo.</i>
Andrews, Elpha	<i>Frederickton, Mo.</i>
Appel, Ella Dundee (Mrs.)	<i>Indianapolis, Ind.</i>
Appleman, George Mordecai l s	<i>Viroqua</i>
Armen, George Krikor l s, m	<i>Racine</i>
Armstrong, Irma Belle	<i>River Falls</i>
Armstrong, Marceline	<i>Jacksonville, Ill.</i>
Arnold, Lester Dallas	<i>Lexington, Va.</i>
Aron, Hilda	<i>Hoskins, Nebr.</i>
Arpin, Cecile l s	<i>Grand Rapids</i>
Arthur, Helen	<i>Marion, Ind.</i>
Artichoker, John	<i>Flandreau, S. Dak.</i>
Ashley, Kate Kane	<i>Madison</i>
Astell, Mollie	<i>Madison</i>
Ausman, Gladys Magdalena l s	<i>Eau Claire</i>
Auten, Mertie	<i>Portland, Ore.</i>
Axley, Harold l s m	<i>Cleveland</i>
Axtell, Lee Reuben	<i>Rockford, Ill.</i>
Aylward, Thomas, Jr. l s, m	<i>Green Bay</i>
Bachbuber, Carl Alvin l s, m	<i>Mayville</i>

Bachman, Charlotte
 Bacon, Lee Fairchild (Miss) 1 s
 Bader, Travis (Miss)
 Baer, Hilda
 Bailey, Chester Leonidas
 Bailey, N. Beth
 Bailey, Nathaniel Arthur
 Bailey, Rex D.
 Baily, Sarah Elizabeth
 Baker, Roschen Turck
 Baker, Verena 1 s
 Baldwin, Muriel Frances
 Ballard, A. Ermine 1 s
 Ballauf, Estelle Elizabeth
 Bancroft, June Seifried
 Bangsberg, Carolla
 Bangsberg, Myrtle Othilda
 Banister, Helen M.
 Bannon, Eveline Cecelia
 Bannon, Margaret Mary
 Banschback, Winifred Genevieve
 Banting, Fergus
 Barber, George Edgerly 1 s
 Barber, Joseph Florence
 Barbour, Mary Lelia Lucile
 Barger, Robert Lynne 1 s
 Barnebey, Ethel Edessa
 Barnes, Roy Hassett
 Barnum, Fred Lewis
 Bartels, Freda Caroline
 Bartholf, Adelaide June
 Bartle, Laura J.
 Baska, Louis Martin
 Bates, Myrle Meron
 Bauer, Carl Philip 1 s
 Baus, Irma
 Beach, Maud Mary
 Beardsley, Charles
 Beck, Mildred Maud
 Beckler, Jacob Elden
 Beckman, Orville Charles 1 s
 Beegle, Marguerite Bruch (Mrs.)
 Behrendt, Ida Irene
 Belgium, B. N.
 Bell, Donald Chesbrough 1 s, m
 Bell, Sallie L.
 Belleville, Dorothy
 Bellis, Mark Edward 1
 Bender, Genevieve Florence
 Bender, Lloyd L.
 Beneke, Henry John 1 s
 Benish, George Anthony
 Bennett, Genevieve 1 s

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Bennett, Rose Elizabeth
 Benson, Ada l s
 Benson, Robert Henry l s
 Bent, Winifred l s
 Benton, Joseph Levi l s, m
 Bentz, Jennette Katharine
 Berg, Leona
 Berge, Abel John
 Bergstein, Leonard l s
 Bergum, Belle Regina l s
 Berthelet, Edna
 Beust, Nora
 Beyrer, Anna Edith
 Bicknell, Helen Chase
 Bieberman, Lucile W. l s
 Biederman, Alfred
 Biggam, Earl E.
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 Binder, Marie Luise
 Birch, Frank Victor l s
 Birch, Mabel Hubbard (Mrs.)
 Bishop, Adolph Edward, Jr
 Bishop, Lawson, W. l s
 Bishop, Stuart Alfred l
 Bitker, Bruno V.
 Bitterman, Ruth Genevieve l s
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 Bjornstad, Mabel Caroline
 Blaha, Bessie B.
 Blaich, Lydia Rebecca
 Blair, John C. l s
 Bleyer, Addison Milton
 Blied, Leo John l s
 Blodgett, Marion North
 Bloodgood, Francis Joseph l s
 Boeckeler, Charlotte Marie
 Boldt, Arnold John l s
 Bolshaw, May
 Bond, Harry William l s
 Bonfoey, Jennie Prudence
 Book, Irma
 Borden, Clarke Atwood
 Borden, William Henry l s
 Borgerding, Jerry William
 Borofka, Philip Joseph
 Borst, Florence
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 Boss, Bernhard Louis l s
 Boucher, Nettalie Harriet
 Bowden, B. Ray, l s
 Bowden, Everett
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Bowen, Esther
 Bowen, Paul E.
 Boyd, Mary
 Boyer, De Witt Angus g
 Boyle, James D.
 Brabant, Josephine Mary l s
 Bradbury, Lily Grace
 Bradish, Norman Conyers l s
 Bradley, Melcena l s
 Brainerd, Nemi Homer
 Bramlette, Milton Nunn e
 Brandt, Anna Marie
 Brannon, Edith M.
 Braun, Harold l s
 Breeding, M. Louise
 Breen, Mildred Helen
 Brewer, Richard Wallace e
 Brewer, Virginia Fletcher
 Briback, Carrie
 Briggs, Howard Bovee l s
 Brindley, Roy
 Bringgold, Jessie Elizabeth
 Brink, Stanley L.
 Brinker, Dorothy Lillian l s
 Brittingham, Edward George l s
 Brittingham, Louis George l s
 Brockert, John Clarence
 Brolin, Marion Theodora
 Brooks, Robert Ray
 Brown, Alois Anton l s
 Brown, Christine Etna l s
 Brown, Earl Franklin
 Brown, Ernest James l s
 Brown, Jessie Beatrice
 Brown, Lela Calhoun l s
 Brown, Marion Frances
 Brown, Milo Sedgwick l s
 Brown, Nellie Margaret
 Brown, Patrick Henry
 Browne, Cyril G.
 Browne, Helen Converse l s
 Bruce, Marshall Everett
 Brummeler, Marguerite
 Brunhoff, Sophie Wilhelmina
 Brunner, Edwin James
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 Bryan, Walter Reid l s
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 Buck, Jennie Pearl
 Buckeridge, Bess
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 Buell, Helen de Yoe l s
 Buell, Irene

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 Alma
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Burch, Harriet Imogene l s
 Burdick, Ralph St. Elmo
 Burke, Mary Virginia
 Burnham, Dorothy
 Burns, Robert Emmett l s, m
 Butcher, Guy Henry
 Butterworth, Alfred Lindley
 Butterworth, Ruth Clark
 Byram, Anna D.
 Camp, Edwin Warren l s
 Campbell, Archie Phelps
 Campbell, Cora
 Campbell, Jane Allen
 Campion, Howard Arthur
 Canniff, Maud
 Cannon, Earl James
 Cape, Mary Josephine
 Capen, Esther Halliday
 Capen, Lila
 Carey, Ray John
 Cargill, George MacMillan l s
 Carlson, Clara
 Carlyle, Tomsyna (Miss)
 Carroll, Elmer Howey
 Carson, William Henry, Jr. e
 Carter, Eleanor Allen l s
 Carter, Lurene
 Carter, Nora Gheens
 Cassidy, Frances Mary
 Cauwenberg, Winfred Joseph l s
 Chau, Tsung Ngok
 Chapin, Daisy Winifred
 Chapman, Margaret Frances l s
 Chapman, Nellie
 Charles, Eva Ruth l s
 Chase, Ruluf Arthur l s
 Chatelain, Barbara Alphonsine
 Cheu, Bailey l s
 Child, John Pollock l s
 Childs, Edward Powell, Jr.
 Chilson, Margaret Elizabeth
 Chilson, Margaret Elizabeth (Mrs.)
 Chynoweth, Phillips
 Cisne, Willis Gerard
 Clack, Willis Charles
 Clark, Donald Hugh
 Clark, Dorothy Elizabeth l s
 Clark, Lois Jean l s
 Clark, Robert Halley l s
 Clarke, Anna Marie
 Clarke, Josephine Freeman l s
 Clauson, Elizabeth Bertha
 Clayton, Edith Louise

Minneapolis, Minn.
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Clifford, Elzie Milo
 Cobb, Helena Josephine
 Cobban, Lorraine I s
 Coffman, Arline Ada
 Cogswell, Nancy Lee
 Cole, Nella Hannah
 Conklin, Katherine Mary I s
 Conley, Henry Harold I s
 Connor, Edwin Joseph
 Connors, Harold Francis
 Conover, Marion Clark I s
 Conrad, Jessie Sargent
 Constance, Fern Elizabeth
 Conway, Lorene Anne
 Conway, Ruth
 Cook, Irene Croxton I s
 Coon, Fayette Burdick
 Cooper, Florence Evelyn
 Cooper, Kathryn Lois
 Cooper, Walter Grant
 Corcoran, Lillie E.
 Corcoran, Marguerite M.
 Coubal, Laudimire Joseph
 Covey, Edwin Linnell
 Cowan, John Warren
 Cox, Linton Alden I s
 Cox, Sam J.
 Cox, Walter Albert
 Coy, Abbie D. (Mrs.)
 Cozzens, Mildred Josephine
 Craig, Harry Worthington I s
 Craig, Laura Philippa
 Crandall, George Washington a
 Cronk, Grace Bell
 Culver, Catherine I s
 Cummings, Charles Milton
 Cummings, Raymond Henry I s
 Cuneo, Rose Yolanda
 Currie, Agnes Elizabeth
 Curtis, Kenneth I s
 Cuson, Emilie Barbara (Mrs.)
 Czapanskiy, Rosella Marie
 Dabney, William L.
 Daetsch, Lillian
 Dahl, Charles Henry I s
 Dahn, Adelaide Henrietta
 Damuth, Lenora Rosane I s
 Darling, William Thomas
 Darrenougue, June Marie
 Daugherty, Lewis Sylvester
 Daugherty, Millie C. (Mrs.)
 Davidson, James Ferdinand
 Davies, Nellie Eleanor

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Davis, Carrie
 Davis, Frank Dewey
 Davis, Marguerite Vivian l s
 Davis, Marion Evelyn l s
 Davis, Martha Ella
 Day, Evelyn l s
 Day, Nellie Maud
 Dean, James Reeve
 Decker, Venora (Mrs.)
 De Jough, Helen Theodora
 Denfeld, Emma L.
 Denfeld, George August l s
 Denison, Clara Elizabeth
 Dennett, Jeanne
 Dennis, Clayton Stanley l s
 Devany, Anne Mildred
 De Vilbiss, Bess Beatrice
 Dick, Mary Catherine l s
 Dickson, Gail
 Diebold, Carrie Elise l s
 Ditmer, Jean Albaugh
 Dixon, Evalyn Elizabeth l s
 Dodds, Josephine
 Doherty, Helen
 Doherty, Mary Louis l s
 Dolan, Anna Lenore
 Dolan, Edith A.
 Dolch, Isabel Scherer
 Doll, Walter George
 Donalds, Elliott Raphael l s
 Donaldson, Nellie King l s
 Donovan, Margaret l s
 Dopkins, Elmo Carlyale l s
 Doran, Blanche Marie l s
 Dorsey, Ruth Anna Laird
 Dorward, Elsie Estelle
 Doudna, Edgar George
 Dougherty, B. Fay
 Douglas, Helen
 Douma, Eddina Pauline l s
 Downey, Elizabeth
 Downs, Donna
 Downs, Frank Emmett
 Drake, Vera Marguerite
 Dresser, Minnie
 Drew, Janet M.
 Duecker, Werner Wilfred
 Duffy, G. Marguerite l s
 Duggan, Elizabeth Veronica
 Duke, John Logan
 Dukes, Mary Geraldine
 Dumas, Marguerite Vera a
 Dummer, Ethel Sturges l s

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Dunham, Henry Kennon
 Dunlap, Lulu Thoma
 Dunn, Mabel Louise
 Dunn, Wendell Earl
 Dunning, Laura Francelia
 Dunster, Corlie Frances
 Dupuy, Mary Elizabeth 1 s
 Durrie, Agnes 1 s
 Durrie, Janet 1 s
 Dyer, Lilia
 Dyrenforth, Carroll
 Early, James Marshall
 Eastland, Vera
 Eaton, Helen Orissa 1 s
 Ebbert, Georgia Grosvenor 1 s
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 Edwards, Eugene Theodore 1 s
 Egan, Ellen Winifred 1 s
 Ehler, Helen
 Eickhoff, Emma Marie
 Eisenhardt, Lucille
 Elbert, Ethel Bernice
 Elder, Edwin Sharretts 1 s
 Elder, Eunice Mary
 Eldred, Roy Frank
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 Ellis, Margaret Helen
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 Ellman, Florence Jeanette 1 s
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 Ely, Anna Mason 1 s
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 Enge, John Jacob
 Engelbrecht, Elma Caroline
 Engelbrecht, Mabel Angeline
 Ennis, Lester Carl
 Enslein, Claude
 Erb, Priscilla Ann
 Erickson, Fred William
 Erickson, Gertrude Winifred 1 s
 Erickson, Gratia Shipman
 Escabi, José 1 s
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 Etheridge, Edith Grimshaw
 Etter, Rolland Robert 1 s
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 Evans, Thomas Iorworth 1 s
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 Ewald, Louis Philip 1 s

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 Farley, Lenora A. 1 s
 Farr, Helen Esther
 Farrand, Jack Easton 1 s
 Farrer, Katherine Janet
 Farrington, Joseph Rider 1 s
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 Feathers, Leonard Clark 1 s
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 Fellman, Judson Le Roy 1 s
 Felten, Hilbert Oscar 1 s
 Fendley, Jessie
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 Ferguson, Edna Rae
 Finch, Bertha Parsons
 Findeisen, Arthur Henry
 Fink, August Oscar
 Fink, Howard Rolland a
 Finnegan, Lawrence Raymond
 Fischer, Roy Frederick 1 s, m
 Fisher, Myrtle Marvelle
 Fisher, Tessie Pearl
 Fitzpatrick, Daniel W.
 Flagg, Charles Abner
 Flint, Jessie Ethel
 Flood, Rose Esther
 Foran, Mary B.
 Foristell, Naomi Whitfield
 Foskett, Horace Webster 1 s
 Foster, Mary Louise
 Fowler, Oscar Fern
 Fox, Earl W.
 Fox, Milford Gerald
 Frahm, Alvina
 Fraser, Margaret Alice 1 s
 Frazier, Cecil Austin 1 s
 Freeman, James Richard
 Freund, Walter Emerson
 Friday, Clara Augusta
 Friedgen, Elisabeth
 Fristoe, Nancy Jane
 Fritsche, Albert
 Fuehring, Fred John
 Fuller, Ada Alfarata
 Fuller, Eva
 Fuller, Florence Dell 1 s
 Fuller, Henry Chester 1 s

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 Sheboygan
 Madison
 Madison
 Milwaukee
 Milwaukee
 Galveston, Texas
 Weyauwega
 Wauwatosa
 Chicago, Ill.
 Green Bay
 Fond du Lac
 Kenosha
 Ironton
 Lancaster
 Sidney, Mont.
 Warren, Ind.
 Missoula, Mont.
 Ashland
 Sun Prairie
 Chicago, Ill.
 Joliet, Ill.
 Foristell, Mo.
 Shenandoah, Iowa
 Indianapolis, Ind.
 Algonquin, Ill.
 Plum City
 Shepherd, Mich.
 Milwaukee
 Burlington
 Prescott
 Sparta
 Cedarburg
 Oshkosh
 Connersville, Ind.
 St. Louis, Mo.
 Minneapolis, Minn.
 Evansville, Ind.
 Grand Rapids, Mich.
 Grand Rapids, Mich.
 Madison
 Whitewater

Fullerton, Anna Marguerite
 Fulton, Charles Archibald
 Funkhouser, Selmes Paul
 Gaarder, Herbert M.
 Gabler, Elmer Vern l s
 Gaffney, Edward James a
 Galbraith, Victor Arrol l s
 Gallagher, Bertha
 Gallagher, Katherine Bodwin
 Gardner, Dorothy Genevieve l s
 Gasser, William Pape
 Gath, Flora Mabel
 Gaveney, Stanleigh l s
 Geary, Sada Malone (Mrs.)
 Geiss, Margaret Kathrine
 Gibbon, Owen Benjamin
 Gibson, Ethel Hardy (Mrs.)
 Giddings, William Werner c
 Giffey, Hertha
 Gilbert, Otto Gustav
 Gildey, Margaret Louise
 Gill, Charles Albert l s
 Gill, Roy E.
 Gillies, Mary Catherine
 Gillis, Dorothy Clare
 Gillogly, Laurel Elaine l s
 Gilpin, Margaret l s, w l s
 Girard, R. Bernadine
 Glandon, China Miriam
 Glassner, Esther Miriam l s
 Gleason, Ida
 Glenn, Frances
 Godfrey, Redella Jane
 Goetz, Anna Frances
 Golden, Jennie Alberta
 Gollmar, Edith
 Gordon, Edith Miller (Mrs.)
 Gordon-Smith, Jean
 Gorman, Robert Nestor
 Gossard, Helen Ray
 Grandstrand, Alice Virginia
 Grandy, Arlia Mary
 Grason, Eunice May
 Graves, Geneva Muriel
 Greene, Bertha Hobart (Mrs.)
 Greening, Florence
 Gregg, John William
 Gregg, Wells Kellogg l s
 Gregor, Rosa Claire
 Griesbach, Linda Minnie
 Griewisch, Edna Marguerite
 Grigsby, Doris Bertha
 Griswold, Frank Lynn l s

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 Stevens Point
 St. Louis, Mo.
 Onalaska
 Madison
 Green Bay
 Janesville
 Independence, Mo.
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 Platteville
 Naperville, Ill.
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 Arcadia
 Pittsburgh, Pa.
 Evansville, Ind.
 Madison
 Oklahoma City, Okla.
 Mendota
 Oak Park, Ill.
 Milwaukee
 Waupun
 Madison
 Galesburg, Ill.
 Chicago, Ill.
 Superior
 Mt. Carroll, Ill.
 Duluth, Minn.
 Edgerton
 Mexico, Mo.
 Milwaukee
 New Richmond
 Chilton
 Whitewater
 Milwaukee
 Marinette
 Baraboo
 Auburndale, Mass.
 Madison
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 Kansas City, Mo.
 Copas, Minn.
 Shioclon
 Council Bluffs, Iowa
 Viroqua
 Marinette
 Toledo, Ohio
 Minneapolis, Minn.
 Madison
 River Falls
 Plymouth
 Green Bay
 Evansville, Ind.
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Griswold, Mabel Elizabeth l s	Madison
Gronberg, Clarence O.	Elgin, Ill.
Gross, Arthur Albert l s	Milwaukee
Gruber, Sarah	Milwaukee
Guggenheim, Irene	Chicago, Il.
Gurney, Ellen Anna l s	Madison
Haack, Robert Conrad	Monroe
Haagen, Caroline Magdalen	St. Louis, Mo.
Haas, Francis Joseph	St. Francis
Haessler, Gertrude J. l s	Milwaukee
Haessler, Helen A. l s	Milwaukee
Hagopian, Bedros l s	Madison
Hahn, Allan Richard	Ironwood, Mich.
Hahn, Emanuel Leopold l s	St. Louis, Mo.
Hahn, Hannah (Mrs.)	St. Louis, Mo.
Hahn, Rose Linz l s	St. Louis, Mo.
Hain, Esther M. .	St. Louis, Mo.
Haines, Clara Lydia	Merrimac
Halbert, Frances	Chicago, Ill.
Halbert, Howard Valmore l s	Chicago, Ill.
Haley, Ellen Marie	Woodstock, Ill.
Hall, Earl Hopkins l s, m	Madison
Hall, Lawrence Waterbury l s	Madison
Hall, Luella Jemima	Mohall, N. Dak.
Halsor, Anna Semelia l s	De Forest
Halvorson, Adolph Lawrence	Oconomowoc
Hames, Martha Rose	Madison
Hamilton, Florence Irene l s	Tomah
Hamilton, Mabel Delia	Oshkosh
Hamilton, William James	Two Rivers
Hancox, Lottie	Chicago, Ill.
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Hanley, Marguerite Catherine John	Portage
Hanley, Mary Lois l s	Milwaukee
Hanberry, James Harry l s	Woneoc
Hansen, Elmer Harry	Minneapolis, Minn.
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Hanson, Bess Frances	Stacyville, Iowa
Harbert, Agnes	Madison
Hardy, James Edward, Jr. l s	Louisville, Ky.
Hargitt, George Merton	Normal, Ill.
Harker, Will	Argyle
Harlan, Mabel Louise (Mrs.)	La Fayette, Ind.
Harloff, Rose Alice l s	Madison
Harris, Pickens E.	Huntsville, Texas
Harrison, Norvell	Charleston, W. Va.
Hart, Bernard Ellis	College Station, Ark.
Hartwig, Elizabeth Adolphine l s	Hartland
Harwell, Edward Allen	Jackson, Miss.
Harwood, Viola	Devil's Lake, N. Dak.
Hassard, William R.	Ashland
Hasse, Otto William	Monroe

Hastings, Henry Lawrence e
 Hawkey, Alice Lucille
 Hawkins, Eskie Theodore l s
 Hawkins, Walter Hurlburt
 Hayes, Arthur Michael l s
 Hayes, Kathryn Hope
 Hayssen, Irma Charlotte l s
 Healey, Marie C.
 Healy, Margaret Ellen
 Heaston, Anna Margaret
 Heath, G. Earl
 Heaton, Helen Reitze
 Heckerman, Ruth
 Heckmann, M. William
 Heffron, Della Agnes
 Heffron, Eileen Stinson
 Hegner, Nancy A.
 Heilbronner, Herbert E.
 Hein, Edward Nicholas
 Hein, Frederick William
 Heiser, Juliet Eloise
 Helmes, Lloyd Oscar l s, m
 Helz, Marie Frances
 Hemenway, Homer Selmo
 Henderson, George von Bunsen l s
 Henkel, Albert John
 Henkel, Almira Lisetta l s
 Henning, Oscar C.
 Henry, Marcella l s
 Herke, Salen
 Herman, Eliza J.
 Herman, Estelle
 Herrick, Donald Lukes l s
 Hertzberg, Oscar Edward
 Hess, Mildred A.
 Hessman, Amanda C. l s
 Heublein, Clarence Martin l s
 Heyman, Edna May
 Hickey, James Sheridan a
 Hicks, Beaxton
 Hicks, Myldred Amy
 Higgins, Catherine Romana l s
 Hillman, Gertrude Cecelia
 Hineline, Harris Dale
 Hintzman, William Frederick l s
 Hipke, Lucius Warrington l s
 Hirsch, Everett Charles
 Hjort, Amanda Marie
 Hodges, Fred Jenner l s, m
 Hoffman, Hannah Emma
 Hoffman, Otis Edward
 Hoidahl, Aagot Dorothea
 Holbrook, Laura Prudence

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Monadnock, N. H.
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Hollahan, Catharine E.
 Holm, Eiffel Alfred
 Holman, Alfreda
 Holub, Libbie Marie
 Holzer, Mae Luella
 Homan, Helen Elizabeth
 Hood, Sadie E.
 Hoppin, Edith
 Horner, Frances Lavantia
 Horwitz, Herman Lazarus
 Hosler, Gilbert Roy
 Hosman, David Fay 1 s
 Hosty, Margaret Mary
 Hovrud, Nora Christine 1 s
 Howell, Etta Hudson
 Hsieh, Hsueh Lian 1 s
 Huaco, Sergio Arturo
 Huang, Feng-hua 1 s
 Huber, Kate D. 1 s
 Huber, Wallace Fred
 Hughes, Anna Myra 1 s
 Hughes, Idrys Oralend
 Hughes, Margaret Mary
 Hughes, Robert William
 Huguenin, Helen Converse
 Hull, Helen Claire 1 s
 Hummel, Earl Phillip
 Hunsdon, Nelson S.
 Hunter, Mary Catherine
 Hutchison, Josephine Ladner
 Hyldoff, Ewold Andrew
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 Irish, Foster William
 Irvine, Margaret Rendall
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 Jackson, Sydney Charles
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 Jacobi, Florence Ethel
 Jacobs, Gertrude Margaretta 1 s
 Jamieson, Arthur A.
 Janssen, Elmer Theodor
 Jantz, Edward Frank
 Jay, Erskine L.
 Jenison, Marguerite Edith 1 s
 Jenkins, Esther 1 s
 Jenkins, George H. Jr., 1 s
 Jenkinson, Jennie Simmons
 Jenny, Adele Theodora 1 s
 Jensen, Alfred Magnus c
 Jensen, Esther Andrea C. 1 s
 Jensen, Clara

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Jerabek, Joseph August 1 s
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 Johnson, Anna Emily
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 Johnson, Helen
 Johnson, Lula Martha
 Johnson, Mary Edmunds
 Johnson, Maude Evangeline
 Johnson, Paul Aaron
 Johnson, Ralph Burbank 1 s
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 Johnson, Roscoe Edwin 1 s
 Johnson, Ruth Ellsworth 1 s
 Johnson, Sophia Munroe
 Johnson, Virginia Head
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 Jones, Elbert William 1 s
 Jones, Emery Morris
 Jones, Gladys Omega
 Jones, Harrison John
 Jones, Harry Ervin
 Jones, Ina E.
 Jones, Irving Willard
 Jones, Minnie Williams
 Jones, Thelma Fay 1 s
 Judd, Siegel Wright
 Judell, Maxson Foxhall 1 s
 Judson, Eppie Eleanor
 Judson, Ethel Emmaline
 Kahlenberg, Hester 1 s
 Kahler, Harry Herman
 Kahler, Minnie Augusta
 Kahn, Herbert Manderl 1 s
 Kailen, Florence 1 s
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 Karger, Ralph Simon 1 s
 Karlstram, C. E.
 Kaufman, Pearl 1 s
 Keating, Marie Angelo
 Keeler, Cordelia
 Keim, Lois
 Keirn, Martha
 Keller, Mabel
 Kelley, Fern
 Kelley, Harriet Clark
 Kelley, Lelia Rose
 Kellogg, Horace B. 1 s
 Kemmer, Frank Leonard 1 s
 Kemp, Earl Parker 1 s
 Kentzler, Ruth Purdy 1 s
 Kepke, Clara Louise Fredericka 1 s

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 Randolph, Ohio
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 Waupun
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 Platteville
 West Salem
 Friendship
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 Grand Rapids, Mich.
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 Kalamazoo, Mich.
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 Appleton
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 Carthage, Mo.
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 Greensburg, Ind.
 Elgin, Ill.
 Indianapolis, Ind.
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 Antigo
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 Kempton, Ind.
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- Kepner, Harold Raymond
 Kerckhoff, Viola Nellie
 Kerrigan, Marguerite
 Kerswill, Emily Louise l s
 Kesterson, Mabel Irene
 Ketcham, Hazel Mae l s
 Keyes, Mary l s
 Kidder, Mattie Elizabeth (Mrs.)
 Kiefer, Gladys Lola
 Kiewit, Ethel Grace
 Kiley, William Earl l s, m
 Killian, Catherine Adele
 Kindley, Ralph Bernard
 Kindred, Geraldine Ruth
 Kindred, Gladys Martin
 King, John Fitch
 King, Zita
 Kinney, Carlotta Hortense
 Kissner, Florence Emma
 Kittleson, Kyrren Becca
 Kleb, Marie Rosine
 Kletzien, Adonis l s
 Kletzien, Loyal Herman l s
 Klodtz, Vernon Earl l s
 Knipp, George Lewis
 Knowlton, Helen Sheldon l s
 Knowlton, Margaret Roper l s
 Knutson, Esther Gunilda
 Koehler, Benjamin
 Kohlhoff, Carl l s
 Kohr, Hugo John l s
 Koons, Ernest N.
 Kraatz, Walter Charles l s
 Kragh, Herbert Erthol l s
 Krasselt, Otto Louis l s
 Kraus, Glenn Vierung
 Krebs, Martha M.
 Krieger, Frida Johanna
 Kroening, Emil Carl
 Kruschke, Walter Frank
 Kuechenberg, Marie Edith
 Kum, Keen-Seen
 Kylo, Christie MacLennan
 Lackey, Esther Hutchins l s
 Lacy, Mabel Vivien (Mrs.)
 Ladley, Stella S.
 La Due, Russell Marseby l s
 Lakoff, Charles Benjamin l s, m
 Lamont, Dallas Ralph e
 Landauer, Cecile
 Lander, Miles Krause l s
 Landwehr, Margaret Emma
 Lang, Edgar F.
 Denver, Colo.
 St. Louis, Mo.
 Elroy
 Park Falls
 Princeton, Mo.
 Grand Rapids, Mich.
 Madison
 Madison
 Hazelton, Iowa
 Omaha, Nebr.
 Byron, Ill.
 Chicago, Ill.
 La Crosse
 Meadow Grove, Nebr.
 Meadow Grove, Nebr.
 Youngstown, Ohio
 Johnstown, Pa.
 Galesburg, Ill.
 St. Louis, Mo
 Junction
 Reedsburg
 Madison
 New Holstein
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 Auburn, N. Y.
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 Muskegon, Mich.
 Mishicot
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 Chicago, Ill.
 Temple, Okla.
 Madison
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 Milwaukee
 Marshfield
 St. Louis, Mo.
 Milwaukee
 Wausau
 Waldo
 Waupun
 Shanghai, China
 Wausau
 Oak Park, Ill.
 Grand Rapids, Mich.
 Pittsburgh, Pa.
 Luverne, Minn.
 Chicago, Ill.
 Oregon
 Atlanta, Ga.
 Grand Forks, N. Dak.
 Milwaukee
 Jefferson

Lang, Marcella O'Leary A. (Mrs.)
 Langan, Mary Elizabeth
 Lange, Alexander I s
 Lange, John Robert
 Lange, Marjorie Max
 Langwith, Olive
 La Pierre, Lillian
 Larck, Miriam Messner
 Larrick, Erma Beatrice
 Larsen, A. Ferdinand
 Larsen, Gustav
 Lasher, John Howard
 Lasley, Mary Lois
 Lathers, Olive Gladys
 Lathrop, Albert Isaac
 Lawrence, Clara
 Lawrenz, Roy Herman I s
 Layde, Joseph Bernard
 Leaper, Clarence Gillingham
 Leary, Julia Lenore I s
 Leasure, Ernestine
 Leavitt, Helen H.
 Lederer, Carl S. I s
 Lee, Blanche Rebecca
 Lee, Tachong, I s
 Leeden, Hebe
 Leggett, Marvin Charles
 Lehner, Otto P. I
 Lemmel, Lawrence Howarth
 Lenz, Edwin Robert
 Leslie, Kathleen
 Lester, Burton Hurlburt
 Leuchtenberger, Fred
 Levin, Mollie
 Levis, Winden George
 Lewis, Dan
 Lewis, Florence Elizabeth I s
 Lewis, Marie E.
 Lewis, Martha Rose Ettie
 Lewis, Raymond I s
 Liang, Chuan-ling I s
 Lichtfeldt, Clarence H. I s
 Lieber, Ruth Evaline
 Lieberman, Sylvia
 Light, Sarah Margaret
 Lightcap, Laura Alice
 Lindem, Christian Jacob
 Lindop, Mabel Edith
 Lindquist, A. Lillian
 Lindsay, Jeannette Breed
 Lindsay, Russel Gilbert I s
 Lingle, Paula Elizabeth Nancy I s
 Littig, Lawrence Victor I s

Spokane, Wash.
 Kenosha
 Madison
 Wausau
 Madison
 Davenport, Iowa
 South Bend, Ind.
 Chicago, Ill.
 Lenora, Kans.
 Pembine
 Madison
 Thorp
 Kansas City, Mo.
 Madison
 Madison
 Marion, Ind.
 Portage
 Seneca
 Madison
 Madison
 Arkansas City, Kans.
 Minneapolis, Minn.
 Chicago, Ill.
 San Angelo, Texas
 Kayin, China
 Madison
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 Seattle, Wash.
 Wausau
 Verona
 Chicago, Ill.
 Milwaukee
 Chicago, Ill.
 Madison
 Danville, Ill.
 Madison
 Rockford, Ill.
 Richland Center
 Madison
 Shantung, China
 Milwaukee
 Winnetka, Ill.
 Independence, Mo.
 Ottawa, Ohio
 Madison
 Minneapolis, Minn.
 Oak Park, Ill.
 Chicago, Ill.
 Marion, Ind.
 Milwaukee
 Madison
 Davenport, Iowa

- Little, Theresa
 Livingston, Edward Meakin l s, m
 Lloyd, Edwina Turner l s
 Lockhart, Harriet Marvin
 Lofgren, Esther Cecilia
 Logan, Alvin Edison
 Logan, Hilda Zell
 Logue, Elmer Brewster
 Loomis, John Lawrence l s, m
 Lorentz, Irving Walter Paul
 Lorenz, Ellen l s
 Lorscheter, John Mathias
 Loucks, Mildred Myrtle
 Loughlin, Agnes Celestine l s
 Lovell, William Edgeley, Jr.
 Lowitz, Jack
 Luckey, Viola Mae
 Ludlow, Evelyn C. l s
 Lynch, Agnes
 Lyons, Helen Margaret
 Lyons, Mary Elizabeth
 McAneney, Jessie Viola
 McCaffrey, Arthur Laurance l s
 McCain, Katie Lou
 McCarthy, Blanche Marie l s
 McCarthy, Elizabeth Lucile l s
 McCaughey, Mabel Marie
 McCaull, Nora Elizabeth
 McCollom, James Arthur
 McCormick, Ethel Helen
 McCrory, Raymond J. l s
 McCullough, Elizabeth
 McCullough, George Howard
 McDonald, Blanche Lois l s
 McDougle, Verne Russell
 McFarland, Edna Margaret
 McFarland, Hala
 McGinnis, Frances Elizabeth
 McGlathery, Pattie
 McGlynn, Thomas Joseph
 McGraw, Othie Oma
 McGuinness, Margaret
 McHugh, Glenn Eller
 McIntosh, Roscoe Lyle
 McKay, Frances Josephine l s
 McKay, Frederick William l s
 McKennan, Luella Montgomery (Mrs.)
 McKennan, Rachel l s
 McKennan, Ruth l s
 McKenzie, H. M. (Mrs.)
 McKinney, Edith Burch
 McLean, Catherine C.
 McMahon, Rolla James
 Peshtigo
 Madison
 Ravinia, Ill.
 Duluth, Minn.
 Madison
 Columbus, Ind.
 Columbus, Ind.
 Merrilan
 Madison
 Milwaukee
 Madison
 Ashland
 Chicago, Ill.
 Madison
 Omro
 Chicago, Ill.
 Morley, Mo.
 Monroe
 Superior
 Pontiac, Ill.
 Pontiac, Ill.
 Council Bluffs, Iowa
 Madison
 Carrollton, Miss.
 Madison
 Milwaukee
 Chicago, Ill.
 Kansas City, Mo.
 East St. Louis, Ill.
 Madison
 Milwaukee
 Independence, Mo.
 Independence, Mo.
 Beaver Dam
 Madison
 Chicago, Ill.
 Terre Haute, Ind.
 Chicago, Ill.
 Greenwood, Miss.
 Cazenovia
 Bartlesville, Okla.
 Toledo, Ohio
 Madison
 Edgerton
 Fall River
 Oshkosh
 Madison
 Madison
 Madison
 Kenosha
 Pittsburgh, Pa.
 Chicago, Ill.
 Kewaunee

McNabb, Mary Clarissa
 McNally, Estelle
 McNaught, Clifford Fowler
 MacOwan, Jean Elizabeth
 McQuown, Norvin
 McSorley, Ethel M.
 Macdonald, Alexander
 Mack, Florence Dorothy
 Mackedon, Leo William 1 s, m
 Mackenzie, James Norman 1 s
 Magenis, Alice
 Magruder, Denton Adlai
 Maguire, Irene
 Maher, Catherine Mary 1 s
 Mahler, Herbert Phillip 1 s
 Mailandt, Eyloe Dorothy
 Mains, Seward Lincoln, Jr.
 Malcolmson, Oliver Krause
 Maley, Helen Bridget
 Mallon, Mary Josephine
 March, James Herbert 1 s
 Mark, Louis
 Marks, Lillian A.
 Marling, Robert Newcomb 1 s
 Marquardt, Willard Horace
 Marsh, Florence
 Marshall, Katherine
 Marshall, Margaret
 Marshall, Samuel Hagar 1 s
 Marshall, William Hughes 1 s
 Marston, Ava Pearl
 Martin, Alice May
 Martin, Charlotte Louise
 Martin, Daisy Moore
 Martin, Elsie Vance
 Martin, Finley Furman 1 s
 Martin, Fred Charles
 Martin, Hazel Isabelle 1 s
 Martin, Ina Ruth Elizabeth
 Martinez, Donald Skillman
 Martinson, Margaret
 Marvin, Margaret Adeline
 Mason, Anna C.
 Mathews, Isabelle Bertram 1 s
 Matravers, Chester Harold
 Matzen, Herbert James 1 s
 Maurer, Kathryn Agnes 1 s
 May, Geneva Irene
 Mayers, Marion Catherine 1 s
 Megede, Nell Bonde
 Meister, Ruth Phyllis 1 s
 Meland, Norman
 Melville, Florence Ruth

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 Duluth, Minn.
 Rochester, N. Y.
 Yorkville, Ill.
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 Pittsburgh, Pa.
 Peoria, Ill.
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 Milwaukee
 Madison
 Indianapolis, Ind.
 Westville, Ill.
 Chicago, Ill.
 Milwaukee
 Milwaukee
 Burlington, Iowa
 Crete, Nebr.
 Kansas City, Mo.
 Dunkirk, Ind.
 Chicago, Ill.
 Warren, Ohio
 Ironwood, Mich.
 Madison
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 Dayton, Ohio
 Wausau
 Chicago, Ill.
 St. Joseph, Mo.
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 Washington, D. C.
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 Kenosha

Meng, Grace Elizabeth
 Menzel, Flora Louise
 Merriam, S. Lee
 Merrill, Inez Chapman
 Merritt, Fannie
 Metcalf, Alice Roberta
 Metcalf, Minnie Wilson
 Metz, John
 Metzger, Grace Esther
 Meulemans, August Martin l s
 Meyer, Evelyn Lucy
 Meyrick, Gordon Sumner e
 Middlekauff, Helen
 Middleton, Forest Case l s
 Midgard, Judith May
 Mielenz, Irving A. l s
 Millar, Helen Rachel l s
 Millard, Paul Vilas l s
 Miller, Carl l s
 Miller, Floy Salene
 Miller, Hazel Eola
 Miller, John Coventry l s
 Miller, Louise
 Milligan, Margaret McCrae
 Millikin, Kathleen l s
 Milliren, Monroe B.
 Mills, Joseph Ralph
 Mishelow, Edward l s
 Mitchell, Madelaine
 Moeschler, Clara Margaret
 Mohme, Erwin Theodore l s
 Moll, Arthur McKenzie l s, m
 Moll, Lulu
 Moon, Joe Nathan l s
 Mooney, Marian Louise l s
 Moore, Bess
 Moore, Laura Edna
 Moore, Wilna Vernon
 Morey, Gladys
 Morey, Helen Derexa
 Morgan, Bonnie Bessie
 Morgan, Frederic Evan
 Moroney, John Rodgers
 Moroney, William Joseph, Jr.
 Morris, Alida Edna
 Morris, Irene l s
 Morris, John Fox
 Morsell, Mary Pendleton l s
 Morton, Charles Delos l s
 Moser, Clara Pauline l s
 Moser, Fred Joseph
 Moser, Robert
 Moser, Will Charles

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Beltingham, Wash.
Pardeeville
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Lena, Ill.
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West Wrightstown
Mt. Washington, Ohio
Milwaukee
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Madison
Stoughton
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Lake Geneva
Antigo
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Kenton, Mich.
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Elmwood
River Falls

Mowat, Jessie Catherine
 Muchmore, Joy
 Mueller, Alfred Dominic I s
 Mueller, Edward Julius
 Mueller, Elsa Dora
 Mueller, Lilla Caroline
 Mueller, Martha Clara
 Mullane, Alice H.
 Müller, Herbert Arthur I s
 Mullica, John M.
 Mullooney, Nora I s
 Mumm, Edna Elizabeth
 Murphy, Eleanor Jeanette I s
 Murphy, Samuel Alfred I s, m
 Murray, Grace Mildred
 Murray, Hyacintha
 Murray, Martha Ernestine Nellie
 Myers, Roscoe
 Naffz, Alice Camille
 Nagel, George Conrad
 Naidl, George Matthew I s
 Naughten, Mary Regina
 Nelson, Byron Christopher I s
 Nelson, Martha Magdalene
 Nelson, Ruth Blanche
 Nelson, Theodora I s
 Nelson, Wilford Merriam I s, m
 Neprud, Martha
 Neubauer, Paul Frederick
 Neville, Minerva Ellen
 Newbury, Horace Charles
 Newman, Irene Mary I s
 Nicely, Ruth Sarah I s
 Nichols, Clio Johnston I s
 Nichols, Josephine Marie
 Nix, Else Margaret I s
 Norlin, Hilding
 Norman, Leonore Estelle
 Norvell, Grace Rebecca
 Nugent, E. Josephine
 Nuzum, William Alva I s
 Nyhus, Nora Christine
 Oberbeck, Walter Carl
 O'Brien, Marie Eileen I s
 Ochoa, Alfonso Vizcaino
 Ochs, Tillie Marie
 O'Connor, Clarence Wood I s
 O'Connor, John Peaslee
 Odegard, Ethel Jannette I s
 Oesau, Theodore J.
 Offutt, Viola
 O'Hara, Marie Cecelia
 O'Hara, Raphael McNulty

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Port Washington
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Shenandoah, Iowa
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Kansas City, Mo.
Madison
Madison
South Bend, Ind.
Gallipolis, Ohio
Dixon, Ill.
Indianapolis, Ind.
Beloit
Stoughton
Cape Girardeau, Mo.
Saskatoon, Can.
Tomah
Chippewa Falls
Grand Rapids, Mich.
Madison
Chicago, Ill.
Muskegon, Mich.
Milwaukee
Superior
Merrill
New Holstein
Belheada, Md.
Milwaukee
Madison

O'Leary, Clarence
 Olmsted, Helen M. H. (Mrs.)
 Olsen, Lucille Eleanor 1 s
 Olsen, Ruth Elizabeth
 Olson, Alvin Bennett
 Olson, Evelyn Mabel
 O'Neil, Eleanor Catherine
 Oppen, Clara Louise 1 s
 Orcar, Pauline O'bob
 Osborn, Joyce
 Osborn, Margaret Stanton
 Osborne, Adele Baldwin
 O'Shea, M. Vincent, Jr., 1 s
 O'Shea, Regina Josephine
 Ostendorf, Fred Peter
 Otterson, Joseph Orlando
 Outland, Clyde Warren
 Overbey, Mamie (Mrs.)
 Paape, Carl Edward
 Packard, Vernon Wing 1 s
 Pain, Charles Esmond, Jr., 1 s
 Painter, Virginia Estella
 Palin, Milburn Ravenshaw
 Palmer, Kate Loomis
 Palmer, Walter Fred
 Parent, Charles William 1 s
 Park, Florence
 Parke, Vera Janet
 Parker, Augusta
 Parker, Herbert Nichols 1 s
 Parker, Launce Spencer
 Parker, Leonora
 Parks, Clara Dell
 Partridge, Florence A., 1 s
 Patchin, Evelyn Maud
 Paulson, Walter Ernest
 Paulu, Emanuel Marion
 Paxton, Richard Dwight
 Pease, Warren Albert
 Peck, Marjorie 1 s
 Pelton, Harold Edwin Leslie 1 s
 Pember, Audrey Humphrey
 Pemberton, Ina Mamie
 Penhallegon, Mary Genevieve 1 s
 Perlman, Jacob 1 s
 Peter, Elsa
 Peters, Reaves Edwin
 Petersen, James Andrew
 Petersen, Le Roy
 Pett, Alma Emily 1 s
 Pettibone, Vera Hartman (Mrs.)
 Pettis, James T.
 Pettis, Jessie Agnes

Thorp
 Washington, D. C.
 Madison
 Muskegon, Mich.
 Reedsburg
 Chicago, Ill.
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 Weyauwega
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 Indianapolis, Ind.
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 Wellington, Kans.
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 Newark, N. J.
 Platteville
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 Grand Rapids, Mich.
 Fond du Lac
 Salamanca, N. Y.
 Florence
 Lincoln, Ill.
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 St. Louis, Mo.
 Dixon, Ill.
 Iron River
 East St. Louis, Ill.
 St. Louis, Mo.
 Chicago, Ill.
 Spokane, Wash.
 Hollandale
 Horicon
 Bay City, Mich.
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 Duluth, Minn.
 Middleton
 Janesville
 West Plains, Mo.
 Mineral Point
 Madison
 Milwaukee
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 Algoma
 Amery
 Johnson Creek
 Bellevue, Ohio
 Madison
 Menasha

Pfeiffer, Grover Frederick
 Phillips, Bessie
 Phillips, Evelyn Alice
 Phillips, Harold Edward l s, m
 Pieh, Addie Emma l s
 Pierce, Lois
 Pilpel, Emily Marion l s
 Pingry, Mabel Eunice
 Pitts, Joseph Samuel
 Plunkett, Florence Nadine
 Pohle, Viola Elizabeth l s
 Pokorny, Emily
 Polacheck, Jean L.
 Pollard, Seth Whitely
 Porter, Cora Ellen
 Porter, Helen Luella
 Postel, Harold H.
 Potter, Frances Harriet
 Prange, Elmer William l s
 Pray, Carrie Lucretia (Mrs.)
 Preuss, Selma O.
 Pribnow, Harry Warren l s
 Priestler, Oscar Frederick
 Pritchard, Nellie Austin
 Pritzlaff, Edward Frank l
 Probst, Fredrica Sebald
 Prochaska, Joe Frank l s
 Punches, Leo Solomon
 Pyle, Irene Beaumont
 Quail, John Joseph l s
 Queeman, Ethel Angeline
 Quigley, Vernon James l s
 Quinn, Matthew James
 Raborn, George Pendleton
 Racy, Florence Lillian
 Radford, Ruth Marie
 Radtke, Roy Arthur
 Ralph, Franklin Edgar
 Ralston, Lucile
 Ramsay, Eleanore l s
 Ramsey, Laura
 Ramsey, Madeline Eva
 Ransley, Harry Condor
 Raube, Reinhold Henry
 Raubenstein, Eva Mary
 Reed, Chester Arthur
 Reed, Ida Belle Estelle
 Reed, Olive A.
 Rees, Edith Winifred
 Reeve, Laura Washburn
 Rehfeld, Frances Eugenia
 Reichert, J. Lester l s, m
 Reichert, Ramona l s

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 Milwaukee
 West Bend
 West Bend

Reid, Edgar Sterling
 Reindl, Helen Zephrine
 Reining, Margaret Hoffman
 Reither, Tillie
 Renich, Florence Caroline l s
 Rennie, Margaret
 Reasmeyer, Emma Bertha l s
 Reazke, Felix Eugene
 Reul, Myrtle Frieda
 Reynolds, Gladys
 Reynolds, Mildred Marguerite
 Rheingans, William Jacob e
 Rhoads, Dorothy Mary
 Rice, Marion Elaine l s
 Richardson, Alice May
 Richardson, Helen
 Richer, Ruth Caroline
 Ridley, Blanche
 Riely, Genevieve
 Rietow, William Howard l s
 Righter, Pearl Geneva
 Rindy, E. Genevieve l s
 Rinker, Jacob Aaron
 Rinkes, Melva
 Ritchie, Elizabeth (Mrs.)
 Ritter, George J., l s
 Roach, Arthur Milton
 Roach, Melba Clarice
 Roantree, Robert Peter l s, m
 Roberts, Florence Jean l s
 Robertson, Jennie Marie l s
 Robertson, Mary Estella
 Robertson, Walter Kempster
 Robson, William Wallace
 Rodgers, Clarence C., l s
 Rodgers, Thomas N.
 Rogge, Gladys Sara
 Rohn, Grace C.
 Rolfe, Jean Francis
 Roose, Marian
 Rosenow, Gustav Adolph
 Ross, Arthur James, Jr.
 Rothwell, Paul T.
 Royce, Elizabeth l s
 Rubado, Clarence A., l s
 Ruckweed, Martin Alonzo
 Rudd, Ingeborg Elizabeth l s
 Rudie, Neil
 Rudolphi, Mamie E. (Mrs.)
 Rudy, Frances Eleanor l s
 Ruehl, Wilbur H., l s, m
 Ruhnke, Reinhard Herman
 Rumball, Edwin Alfred

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Rock Island, Ill.
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Grand Rapids
Corydon, Ind.
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Carrick, Pa.
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Richmond, Ind.
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Parker, S. Dak.
Superior
Lodi
Ft. Atkinson
River Forest, Ill.
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Oshkosh
Chicago, Ill.
Hixton
Perrysburg, Ohio
Menasha
Perry, Iowa
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Kenosha
Westby
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Beaver Dam
Milwaukee
Ithaca, N. Y.

Runge, Elizabeth Agnes 1 s
 Ryan, Florence Veronica
 Ryan, Helena Margaret
 Rynkszel, Stephen Robert
 Saby, Queenie Anna
 Sadlier, Richard Edward 1 s
 Salentine, Joseph Henry 1 s
 Saltzstein, Felix Cohen
 Saltzstein, Sidney Cohen
 Sarazin, Katherine Isabelle
 Savage, Ethel
 Sawyer, Wilda Amy 1 s
 Saxon, May
 Sayle, George W. 1 s
 Schaaf, Irma Mae
 Schacke, Martha Alvina 1 s
 Schaefer, Leo H. 1 s
 Schanen, Paul
 Schaub, Carl Frederick
 Scheinfeld, Ruhamah
 Scheuber, Frank Adolph
 Schilling, Ethel Florence
 Schimel, Frank Raymond
 Schleck, Leo Peter
 Schlegel, Erna
 Schlimgen, Lucian George
 Schlosser, Francis Frederick
 Schlotthauer, Gertrude Marie 1 s
 Schmidt, Annetta
 Schmidt, Arno John 1 s
 Schmidt, Ernst Conrad 1 s
 Schneider, Leone Katherine
 Schoonover, Arthur Floyd
 Schraa, Nicholas Charles 1 s
 Schroeder, Meta a
 Schubert, Arthur Frank 1 s
 Schuldt, Ella Cora
 Schuler, Catharine Ellen 1 s
 Schulte, Estelle Johanna
 Schultz, Magnus Petersen
 Schustedt, S. Charlotte 1 s
 Schweichler, Lothar Adolph 1 s, 1
 Schweickhard, Ellis Keith
 Scilley, Jean Irene
 Scofield, Ethel Catharine
 Scully, Katherine Elizabeth
 Seegar, Nellie S.
 Seidlitz, Ella
 Seifert, Robert George
 Seiter, Idah Luella
 Sell, Vivian Isabelle
 Selleck, Eugene R.
 Sennett, Margaret Devlin 1 s

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Quincy, Ill.
Dillon, Mont.
Baldwin
Stanley
Calhoun
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Elkhart, Ind.
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Marion, Ind.
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Stevens Point
Marion
Milwaukee
Livingston, Mont.
Green Bay
Tisch Mills
Madison
Westfield
Madison
Eau Galle
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Chicago, Ill.
Davenport, Iowa
Chicago, Ill.
Cleveland, Ohio.
Gotham
Madison
Madison
La Crosse
Barron
Milwaukee
Homewood, Ill.
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Mankato, Minn.
Billings, Mont.
Milwaukee
Pittsburgh, Pa.
Jacksonville, Ill.
Winona, Minn.
Chicago, Ill.
Freeport, Ill.
Sheboygan
Platteville
Madison

Sergeant, Jessie Aurelia
 Seston, Alma Amelia
 Seward, Bertha Hedwig
 Seymour, Whitney North l s
 Shaver, Edna Helen
 Shaw, Cornelia Elizabeth
 Shea, Gertrude
 Shearer, Jonathan Murray
 Sheehan, Katharine
 Shepard, Helen
 Shippek, Edward l s
 Shorey, Inez Ann
 Short, Fred
 Shultz, Flora
 Shumate, Veneta
 Shumway, Robert Burr
 Shurtleff, Dorothy l s
 Sieg, Elmo Ewing
 Siemers, Arthur William
 Siemers, Bertha Bleck
 Sievers, Edward George l s
 Simenson, Oscar l s
 Simmons, William Francis
 Simnicht, Louis A.
 Simpson, Dorothy Kathrine
 Sinaiko, Sohnia l s
 Sister Mary Ellen
 Sister Mary Gertrude
 Sister Mary Jeannette Bodoh l s
 Sister Mary Rosalia Mandel
 Sister Mary Samuela
 Sister Virginia Mary
 Sister Rosemary
 Slade, Katherine Claire
 Slaker, Don Valentine e
 Sletteland, Oscar Bernard l s
 Smiley, Flora Dumont
 Smith, Dorothy Paul l s
 Smith, Edith Edna
 Smith, Ethel Lou
 Smith, Floyd
 Smith, Frood Paul
 Smith, Harold David l s
 Smith, Harriet Ellen
 Smith, Henry Earl
 Smith, Louisa
 Smith, Lynwood Herbert
 Smith, Martha
 Smith, Mary Isabella
 Smith, Nettie May l s
 Smith, Russell Evarts l s
 Smith, Wilhelmina mw
 Smith, William Lester l s
 Sheldon
 Mazomanie
 Beaver Dam
 Madison
 Homewood, Pa.
 Zion City, Ill.
 Chicago, Ill.
 Minneapolis, Minn.
 Grand Rapids, Mich.
 Indianapolis, Ind.
 Madison
 Oshkosh
 Madison
 Logansport, Ind.
 Quincy, Ill.
 Milton
 Boston, Mass.
 Chillicothe, Ohio
 Madison
 Madison
 Madison
 La Crosse
 Milwaukee
 Mellen
 Winona, Minn.
 Madison
 Sinsinawa
 Sinsinawa
 Fond du Lac
 St. Louis, Mo.
 Milwaukee
 Sinsinawa
 Sinsinawa
 Rockford, Ill.
 Janesville
 Pigeon Falls
 Lockland, Ohio
 Madison
 Salt Lake City, Utah
 Warren, Ill.
 Menasha
 Dodgeville
 Platte, S. Dak.
 Milwaukee
 Three Forks, Mont.
 Fennimore
 Nelm, Mo.
 Madison
 Arkansas City, Kans.
 River Falls
 Madison
 Chicago, Ill.
 La Crosse

Snaddon, George Hutton
 Snaddon, Robert I s
 Snell, Harriet I s
 Snodgrass, Etha Cleaver I s
 Snyder, Harry Evan
 Solberg, Victor
 Sorenson, Pauline Kathrine
 Soukup, Mary
 Spafford, Allen e
 Spafford, Ruth Alice
 Spandau, Merle
 Sparks, Lillian May
 Spaulding, Benjamin Warren
 Spear, Osmund
 Speer, Bedell Hudson I s
 Spelliscy, Sara Elizabeth
 Spencer, Ernestine E.
 Sperle, Sara Ottina
 Spiegel, Ralph
 Spillard, Edna Mead
 Sproesser, William Charles I s
 Stabo, Nels Eivind I s
 Stamm, Walter Albert I s
 Stander, Arthur Earl I s
 Stang, Hartwick Martinus m
 Stannard, Marie Eugenia
 Staples, Irene Foster I s
 Staples, May Foster (Mrs.)
 Stark, Roland
 Starkweather, Farre Ida I s
 Starnner, Ethel Irene
 Stebbins, Mary Ford
 Steding, Elsa Susan
 Steeholm, Hardy I
 Steele, Clay Evans I s
 Steele, Florence Irene
 Steele, Frank Mears
 Stehn, Florence Clarke (Mrs.) I s
 Steiner, Herbert Reuben
 Steinfeldt, Gladys Louise
 Steinmetz, Edith M.
 Steketee, Eugene Francis
 Stephan, Carl Thompson I s, m
 Stephani, Ottilie Marie
 Stephenson, Verne Lindsay
 Sterk, Katherine Mary
 Stern, Seigfried Lawrence
 Stewart, Jeanne Lee
 Stewart, Mary Lavinia (Mrs.)
 Stewart, Ralph Osbourn
 Stewart, Robert Bruce
 Stier, Leslie Guy
 Stivers, Grace Helen

Madison
 Madison
 Fargo, N. Dak.
 Eugene, Ore.
 Youngstown, Ohio
 Eau Claire
 Sturgeon Bay
 Chicago, Ill.
 Morrison, Ill.
 Morrison, Ill.
 Pittsburgh, Pa.
 Marshall, Mo.
 San Jose, Cal.
 Indianapolis, Ind.
 Madison
 Litchfield, Minn.
 River Forest, Ill.
 Macfarland
 Milwaukee
 Cincinnati, Ohio
 Milwaukee
 Decorah, Iowa
 Milwaukee
 Madison
 Madison
 Eau Claire
 Osceola
 Osceola
 Westville, Ill.
 Madison, Ohio
 Boscobel
 Utica, N. Y.
 Pittsburgh, Pa.
 Racine
 Belmont
 Philadelphia, Pa.
 Shoales, Ind.
 Madison
 Stevens Point
 West Depere
 Indianapolis, Ind.
 Grand Rapids, Mich.
 Chicago, Ill.
 East St. Louis, Ill.
 South Bend, Ind.
 L'Anse, Mich.
 Montgomery, Ala.
 Indianapolis, Ind.
 Oklahoma City, Okla.
 Homestead, Pa.
 Duluth, Minn.
 Tigerton
 Dayton, Ohio

Stoll, Lucille Alice
 Stoll, Nettie Maurine
 Storrs, Electa North
 Stothart, Paul Pope
 Strange, Curtis Arthur
 Straughan, Cora May
 Strossman, Marion Rae
 Struck, Louis Alfred
 Stubbs, Clayton Thomas
 Stuckey, Arthur Ray
 Stutz, Tekla Eunice
 Suhr, Lewis Delmar I s
 Sullivan, Mary Margaret
 Sullivan, William Thomas
 Sutton, Cora G.
 Sutton, Henry Francis
 Swaim, George Earl
 Swandale, George Tupper
 Swanson, Cleary Neil I s
 Swanton, Milo Kendall
 Swartz, David Arden
 Sweet, Ben I s
 Sylvester, Grace D.
 Tang, Ching Yie
 Taveira, Agnild Linea
 Taylor, Alice
 Taylor, Joseph Vincent g
 Taylor, Marvin Hunter
 Taylor, Mary Carolyn
 Tegeler, Margaret Dorothy
 Tenney, M. Florence
 Teschner, Else
 Thatcher, Frederick Robert
 Thayer, Irma
 Thayer, Vivian Trow g
 Theiss, Anna
 Thiele, Victoria Carolyn
 Thomas, Charlotte B.
 Thomas, Edward J.
 Thomas, Emma Louise Grant
 Thomas, Florence
 Thomas, Foster Keith I s
 Thomas, George Francis
 Thomas, Jane Austin I s
 Thomas, Nancy Catherine
 Thompson, Athol Blythe
 Thompson, Belle Nathalie
 Thompson, Frances Katherine
 Thompson, Helen
 Thompson, Olive Selma
 Thompson, Oscar J.
 Thompson, Victor Emanuel
 Thompson, W. Leonard
 Lincoln, Ill.
 Lincoln, Ill.
 Ft. Thomas, Ky.
 Milwaukee
 Madison
 Marion, Ind.
 Aurora, Ill.
 Gatesville
 Detroit, Mich.
 Washington, Ind.
 Oconto
 Madison
 Freeport, Ill.
 Oconto
 Connersville, Ind.
 Green Bay
 Montpelier, Ind.
 Greenville, S. C.
 Marinette
 Madison
 Mondovi
 Madison
 Chicago, Ill.
 Shanghai, China
 Rockford, Ill.
 St. Louis, Mo.
 Madison
 Louisville, Ky.
 Avalon
 St. Louis, Mo.
 Harvard, Ill.
 Milwaukee
 Elgin, Ill.
 Muskegon Mich.
 Mukwonago
 Milwaukee
 Oshkosh
 Winfield, Kansas
 Madison
 Philadelphia, Pa.
 Superior
 Madison
 Green Bay
 Cambridge, Mass.
 Dunkirk, Ind.
 Grand Rapids, Mich.
 Baldwin
 Florence, Nebr.
 Galesburg, Ill.
 Macfarland
 Greenwood
 Madison
 Madison

Thorud, Madeline
 Threinen, Bert Anthony l s
 Tiemann, Harry August
 Tillman, Arthur George l s
 Tillotson, Ruth Amelia l s
 Tingley, Ethel Fay
 Todd, James Smith
 Toerne, Oscar von l s
 Tomlinson, Ruth Muriel
 Tooley, Leland Keith
 Topp, Bertha Marie
 Torgerson, Theodore L. l s
 Town, George Galloway l s
 Treat, Isabel Glenn
 Tredwell, Lillie l s
 Tree, Orville Le Roy l s
 Treff, Simon Ludwig
 Trilling, Blanche M.
 Troutman, Oliver
 Trueblood, Basil Carl
 Truitt, John William l s, m
 Tufts, Millard
 Tugendreich, Beulah Esta
 Turner, Alice l s
 Turner, Etta
 Turner, Wells Eugene
 Tye, William Leo l s
 Uhr, Adolph
 Vail, Samuel Crane
 Valentine, Frances Chidester (Mrs.)
 Van Arsdale, Helen Seeson
 Van Arsdale, Maurice William l s
 Van Camp, Helen
 Van Dalsem, Newton
 Van Den Berg, William John l s m
 Vanderbie, Chauncey L. l s
 Van Steenberg, Nina
 Vaughan, Harold Frank
 Vaughn, Madge
 Venable, Mary S. (Mrs.)
 Vergeront, Marie Edna l s
 Vick, Anna Margaret
 Vik, Esther Josephine
 Voke, Cora
 Waddell, John Frank l s
 Wahl, John J.
 Wahle, George Henry g m
 Waite, Jay Davies l s
 Walden, Viola Emilie (Mrs.)
 Waldrip, Enid Lamora
 Walker, Belle McMurry (Mrs.)
 Walker, Robert Arlo
 Wall, John Irving l s

Chicago, Ill.
Kenosha
Flint, Mich.
Madison
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Terre Haute, Ind.
Cincinnati, Ohio
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Ashland
Chicago, Ill.
Cincinnati, Ohio
Ontario
Madison
Indianapolis, Ind.
Chicago, Ill.
South Wayne
Manawa
Madison
Mt. Pleasant, Mich.
Salem, Ind.
Naperville, Ill.
Sturgeon Bay
Manistee, Mich.
Port Washington
Winona, Miss.
Wausau
Chicago, Ill.
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Evanston, Ill.
Toledo, Ohio
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Mooseheart, Ill.
Necnah
Madison
Platteville
Lansing, Ill.
Milwaukee
Des Moines, Iowa
Huntington, W. Va.
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Madison
La Crosse
Columbus, Ohio
Evansville
Milwaukee
Marshfield
Madison
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Attica, Ind.
Lawrenceburg, Ky.
Madison
Antigo

Walthall, Robert McBride
 Walther, Max Edwin
 Wamsley, Jennie
 Ward, Gladys Frances
 Wark, Elizabeth Frances
 Warne, Ralph Caldwell
 Warner, Mary Vivian
 Warner, Nellie I s
 Watson, Robert Harvey
 Wattawa, Esther I s
 Wayman, Florence Alwilda
 Webb, Maude Larne
 Webster, Zella Elizabeth
 Wedel, Sylvia Carmen I s
 Weeks, Anne Marie
 Weese, Donald Ouray
 Wehle, Mary Liddell (Mrs.)
 Weillepp, Laura Elizabeth
 Weiscopf, Edna Miriam
 Weisse, Harvey Jennings
 Weisse, Henry Charles
 Weldon, Charles William Temple I s
 Welke, Ernest Gottlieb I s, m
 Weller, Charles Grafton I s, m
 Wells, Alberta May I s
 Wells, Estella Lucetta
 Welty, Stella Katherine
 Wengler, Harold I s
 Werner, Elsie Anna
 Wertheimer, Mildred Salz
 Wessel, Iona Johene I s
 Westcott, May Kendall I s
 Whaley, Regina Estelle
 Whedon, Frances Eliza
 Wheeler, Harold Parker m u
 Wheeler, Warren Gregg I s
 Whinfield, Harold Widdington
 Whipple, Charlotte Elizabeth
 Whipple, Marthana I s
 White, Alice Harris (Mrs.)
 White, Cecil Electa
 White, Charles Ross
 White, Marcus Dec I s, m
 Whiteford, Winnifred Anne
 Whitney, Beryl Esther
 Whitney, Katharine Townsend I s
 Whittet, James Lowell I s
 Wiehl, Dorothy Gerard I s
 Wilbert, Gustave Carl I
 Wilcox, Alfred C.
 Wileden, Arthur Fred
 Wiley, Myra Rowland
 Wilkinson, Wardell

Fort Worth, Texas
Medford
Cedar Springs, Mich.
Mondovi
Kansas City, Mo.
Chicago, Ill.
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Madison
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Madison
Pittsburgh, Pa.
Fl. Atkinson
Spring Valley
St. Louis, Mo.
Racine
Huntington, Ind.
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Sheboygan Falls
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Denver, Colo.
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Cleveland, Ohio
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Madison
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Thiensville
Bangor, Mich.
Templeton
Arcadia
Chicago, Ill.

Willett, Edna Marion
 Williams, Anna
 Williams, Arthur Raymond
 Williams, Ida Caroline
 Williams, Myron Charles 1 s
 Williams, Ray Evan
 Wilson, Allene 1 s
 Wilson, Della
 Wilson, Noble
 Wilson, William Balfour 1 s
 Winship, Amy Davis (Mrs.)
 Winter, Albert Henry
 Wise, Merton Barber
 Witthuhn, Elmer William 1 s
 Wochos, Louis Henry
 Wolcott, Roger Gilbert
 Wolfard, Effie Jeannette
 Wolfers, Robert Charles 1 s
 Wolff, Marie Borchardt 1 s
 Wong, Marvin Yet Hsen
 Woo, Yui
 Wood, Beatrix Lenore 1 s
 Wood, Meta Aileen 1 s
 Wood, Ralph Hereld 1 s
 Woodbury, Frederick Ralls
 Woods, Ruth
 Woodworth, Douglas Harmon 1 s
 Wright, Cornelia 1 s
 Wright, Emma Dean
 Wu, Wei Yoh
 Wyman, Grace
 Wynn, Mary
 Yang, Tsao Shing
 Yocum, William Kerns
 York, Pansy Celia
 Youmans, Henry A. 1 s, m
 Young, Annie May 1 s
 Young, Arthur Tatarian
 Young, Jacob Adelbert
 Young, Jeannette Peters
 Young, John Henry, Jr., 1 s
 Young, William Monroe, Jr., 1 s
 Zanger, Carl Emil
 Zeidler, Florence Caroline
 Zeisler, Emma Louise
 Zeittler, Ella Johanna
 Ziegenhagen, Frederick W.
 Zillmann, Harold Allen
 Zimmerman, Albert John
 Zimmerman, Theresa Elizabeth
 Zimmermann, Hilda Ernestine
 Zimmers, Peter Jeremiah

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 Sioux City, Iowa
 Wild Rose
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 Cape Girardeau, Mo.
 Indianapolis, Ind.
 Bargersville, Ind.
 Belleville
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 Topeka, Kans.
 Rothchild
 Appleton
 Wausaukee
 Madison
 Richmond, Ind.
 Hopkins, Mo.
 Madison
 Shanghai, China
 Swatow, China
 Hancock
 Fulton, Mo.
 Hancock
 East Chicago, Ind.
 Laredo, Mo.
 Sparta
 Winona, Minn.
 Frankton, Ind.
 Hunan, China
 Madison
 Indianapolis, Ind.
 Shanghai, China
 Glen Moore, Pa.
 Superior
 Mukwonago
 Atlanta, Ga.
 Chicago, Ill.
 Colby
 Pittsburgh, Pa.
 Eau Claire
 Lake Beulah
 Chicago, Ill.
 Madison
 La Crosse
 Luxemburg
 West Allis
 Thorp
 Menomonie
 Peshtigo
 Milwaukee
 Manitowoc

Music

Anderson, Margaret m u	<i>Madison</i>
Andrews, Lilly M.	<i>Baraboo</i>
Arthur, Cetelle Maude	<i>Madison</i>
Ayer, Mary L. m u	<i>Verona</i>
Baker, Hazel Eleanor	<i>Woodstock, Ill.</i>
Beecher, Alice Dorothy m u	<i>Madison</i>
Bent, Myrtle Wylie (Mrs.)	<i>Oshkosh</i>
Bischofi, Lenora Lee m u	<i>Madison</i>
Booth, Zoe	<i>Hillsboro, Mo.</i>
Bretscher, Elsie	<i>Muskegon, Mich.</i>
Campbell, Lucille Eleanor m u	<i>Madison</i>
Carpenter, Helen Louise	<i>Muskegon, Mich.</i>
Challman, Hester Matilda	<i>Galesburg, Ill.</i>
Cooper, Ferne I.	<i>Bloomington</i>
Ellwood, Vera Brown	<i>Muskegon, Mich.</i>
Enright, Agnes Elizabeth	<i>Troy Center</i>
Fauerbach, Clara Vierling l s	<i>Madison</i>
Gallagher, Ruth Anna	<i>Pittsburgh, Pa.</i>
Glynn, Maude Elizabeth m u	<i>Superior</i>
Goddard, Grace	<i>Madison</i>
Grignon, Camilla	<i>Kenosha</i>
Hamilton, Harriett (Mrs.)	<i>Two Rivers</i>
Harker, Myra Susan l s	<i>Madison</i>
Hathaway, Eva May	<i>Duluth, Minn.</i>
Heintz, Maude Ellen	<i>Plankinton, S. Dak.</i>
Hessman, M. Lena	<i>Madison</i>
Hoppin, Ruth Estelle	<i>Ashland</i>
Howard, Vera Winifred	<i>Mondovi</i>
Humphreys, Harry Christopher	<i>Madison</i>
Jacobson, Nellie Rose	<i>Burlington</i>
Jedele, Ruth N.	<i>Dexter, Mich.</i>
Jones, Helen Truran	<i>Shullsburg</i>
Jones, Jessamine Barbara	<i>Madison</i>
Knoll, Marie Alma	<i>Milwaukee</i>
Knoll, Eleanore	<i>Milwaukee</i>
Koefod, Laila Virginia	<i>Granite Falls, Minn.</i>
Kremers, Elsa l s	<i>Madison</i>
Lampert, Florence May	<i>Lena, Ill.</i>
Levitan, Ethel m u	<i>Madison</i>
Lloyd, Elizabeth	<i>Mankato, Minn.</i>
Lund, Bertha Theressa	<i>Mt. Horeb</i>
McAnaney, Maude Ethel	<i>Council Bluffs, Iowa</i>
McGaw, Anna Elizabeth	<i>Pittsburgh, Pa.</i>
Mayer, Hildagarde H. m u	<i>Jefferson</i>
More, Grace Van Dyke	<i>Wellington, Kans.</i>
Myers, Ethel Bernice	<i>Quincy, Ill.</i>
Oltman, Myrtle Mable	<i>West Salem</i>
Ord, Gladys	<i>Auburn, Nebr.</i>
Osbon, Bert Paul	<i>Manila, P. I.</i>
O'Toole, Irene Marie	<i>Chicago, Ill.</i>

Palmer, Mabel
 Piper, Helen Elizabeth m u
 Pontius, Claudia Eva
 Porter, Hazel E.
 Prael, Adelaide Louise
 Preston, Charlotte Elizabeth
 Provin, Nina Sloan
 Sanderson, Pearl Evangeline
 Saris, Helen Katherine
 Schalk, Ella Martha
 Seston, Verna
 Sewell, Emily Mae
 Siebecker, Flora Josephine l s
 Skelton, Agnes Cecelia m u
 Stark, Anna Lydia m u
 Stephenson, Ruth
 Sweet, Minnie Lueders (Mrs.)
 Thollehaug, Lola Lusk (Mrs.)
 Thomas, Oka
 Trissler, Georgiana Gwendoline
 True, Lloyd Otho
 Vickers, Raymond Dettloff
 Ward, Golden Adella
 Weed, Ora L.

Madison
 Madison
 Pittsburgh, Pa.
 Portage
 Milwaukee
 Brodhead
 Jamestown, N. Y.
 Milwaukee
 Beloit
 Berlin
 Mazomamie
 Janesville
 Madison
 Madison
 Madison
 Cincinnati, Ohio
 Madison
 St. Thomas, N. Dak.
 Kansas City, Mo.
 Middletown, Ohio
 Madison
 Niagara Falls, N. Y.
 Mondovi
 Pittsburgh, Pa.

College of Engineering

Adams, Thomas Edward l s
 Alaniva, John William
 Albers, Walter Leland e
 Bash, Francis Edwin
 Bechmann, Wilhelm Ernst Karle
 Bendfelt, Herbert Albert e
 Bennett, Joseph Gardner e
 Berteling, Charles Meill
 Bond, Aubrey H. e
 Borgers, William Benjamin
 Brandt, Ellis R. e
 Breuer, Orval William e
 Buchholz, Rudolph O.
 Buck, Howard e
 Buckeridge, Charles Rex
 Burns, John Leo
 Burzynski, Larry Edward e
 Camlin, Harold Andrew e
 Camlin, William J. e
 Carlson, Thorwald A. e
 Carus, Gustave Krueger
 Case, Percival Fuller e
 Casey, Thomas B.
 *Chapin, Huber Alva

Madison
 Madison
 Prairie du Sac
 Madison
 Madison
 Madison
 Madison
 South Bend, Ind.
 Madison
 Chicago, Ill.
 Edgerton
 Manitowoc
 Lemmon, S. Dak.
 Madison
 Beloit
 Prescott
 Milwaukee
 Madison
 Madison
 East Helena, Mont.
 La Salle, Ill.
 Racine
 Chicago, Ill.
 Madison

*Died July 1916.

Clegg, William Gifford
 Collar, George Creighton e
 Connolly, John Mack e
 Conrad, Charles Smedley
 Cooper, Clarence Edward e
 Cox, George Bryan
 Craig, Johnston Gwin
 Crumb, Fred Wells
 Dresen, Joseph Ignatius Herman e
 Eby, Samuel Hilary
 Edwards, Seren Harold
 Engstrom, Leslie G.
 Evans, Wilfred e
 Fanta, Erwin Krainik e
 Farley, John Leverett e
 Flatman, George James e
 Fleckenstein, Clemens Thomas e
 Foeste, Arthur Bruno e
 Fratt, Charles Diller, Jr. e
 Funsett, Harlow Gurmee
 Gamble, Raleigh W.
 Gaul, Emil Otto
 Gerhardt, Fred Peter e
 Gill, Terence Alister e
 Gloger, William Hugo e
 Goldammer, Charles James e
 Goldfein, Irving
 Gould, Edwin Fish e
 Gould, Stephen Grover e
 Gribble, Stephen Charles e
 Grubb, Walter Frank e
 Gumprecht, Henry Herman e
 Hagen, Oscar Edwin e
 Hallock, Niel Carey e
 Harries, Harry George
 Hasenpflug, John Leroy e
 Henderson, Burnie Oliver e
 Henkel, Carl Albert William
 Hilton, Earl e
 Hirshheimer, Harry West e
 Hodgson, Herbert E.
 Holmes, Harold Frederick
 Hook, Harmon Porter I s
 Houghland, Glen Sanford
 Hymer, Howard Golden e
 Jackson, George Stephenson e
 Jenkins, Walter L.
 Johnson, Gordon Gasmann e
 Johnson, Robert Colton e
 Kalvelage, Clem e
 Kielsmeier, Edward Henry e
 Kirch, Louis Adolph e
 Kitzman, Walter Leslie e

Webster Groves, Mo.
Phillips
Milwaukee
Sycamore, Ill.
Ashland
Columbia, Mo.
Kirkwood, Mo.
Milton
Madison
Baltimore, Md.
Madison
Rockwell City, Iowa
Madison
Manitowoc
River Falls
Madison
Marshfield
Sheboygan
Madison
Deerfield
Madison
Muskegon, Mich.
Milwaukee
Chicago, Ill.
Watertown
Elkhart Lake
New York, N. Y.
Superior
Superior
Linden
Madison
Rice Lake
Stoughton
Madison
Milwaukee
Geneva, Ohio
Madison
Mason City, Iowa
Madison
La Crosse
Bisbee, Ariz.
Trempealeau
Oak Park, Ill.
Madison
Lancaster
Depere
De Kalb, Ill.
Amherst
Madison
Milwaukee
Milwaukee
Madison
Eau Claire

Kreuz, Louis G. e
 Kurz, Louis David e
 Lane, Richard Kelvin e
 Lee, Ping-fun
 Liang, Wen Paul e
 Lohr, Freeman Doolittle
 Lord, Herbert Overton e
 Lundberg, Gustaf Moritz e
 Lyman, Alfred Tileston e
 McAdams, Frank Clarence e
 McAteer, James Robert
 McCauley, Edwin Douglas
 McCreary, Arthur Garfield
 McHugh, Keith Stratton e
 Mackey, Walter Curridan e
 Main, Howard H.
 Mansfield, Robert Dustin e
 Mead, Harold Washburn e
 Meisekothan, Edwin Edward e
 Meiselwitz, Adolph William e
 Mendelsohn, Isador William e
 Merrill, John Franklin l s
 Meyers, Paul Duncan e
 Miller, Edmund e
 Miller, George Paul e
 Miller, Ivan Chesbrough e
 Moore, George Thomas e
 Moss, Charles Wallace e
 Moulton, Frank Stillman e
 Mueller, Harold Paul
 Nathan, Walter Solomon e
 Norris, Charles Braxer e
 Oakley, Burks
 Peterson, Arthur Frederick e
 Pieh, Roy John l s
 Pinney, Arthur Joseph e
 Poe, Charles R. e
 Powers, Martin Aloysius e
 Preiser, Godfrey Kreuse
 Prescott, Don Southard
 Prince, Earl Samuel e
 Pritchard, Owen J. e
 Proetz, Charles
 Rankel, Fred Anthony e
 Reece, Robert Howell
 Reinhardt, Joseph Albert e
 Richardson, Glenn Carrol e
 Rinker, Roy Lewis
 Ryan, James Joseph
 Scheinfeld, Emmanuel
 Schmidt, Clarence Walter e
 Schroeder, Alfred George e
 Schustedt, Frederick Nathaniel e

Menominee, Mich.
 Appleton
 Dodgeville
 Canton, China
 Hongkong, China
 Orange City, Iowa
 Oconto
 Superior
 Evanston, Ill.
 Madison
 Madison
 Highland Park, Ill.
 Beloit
 Madison
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 Rockford, Ill.
 Williston, N. Dak.
 Madison
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 Kiel
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 Milwaukee
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 Terre Haute, Ind.
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 Maltoon
 Madison
 Milwaukee
 Milwaukee
 Milwaukee
 Quincy, Ill.
 Madison
 Madison
 West Depere
 Madison
 Fond du Lac
 Milwaukee
 Menominee, Mich.
 Downer's Grove, Ill.
 Fond du Lac
 St. Louis, Mo.
 Milwaukee
 Evanston, Ill.
 Madison
 Madison
 Cadillac, Mich.
 Memphis, Tenn.
 Milwaukee
 Brillion
 Madison
 Madison

Searight, Hamilton Folts e
 Seybold, Lawrence Frederick e
 Shaw, Harold Nichols e
 Sizer, Frank Milton
 Slichter, Louis B. e
 Smith, Philip Harold e
 Smith, Robert Evans e
 Stahl, Charles Henry
 Stearns, Harry Carpenter
 Steffins, David Burton
 Steinle, Clinton Rolland e
 Stilwell, J. Gerald
 Stites, Luke Sells
 Striegl, Albert Rollin
 Strong, Albert J.
 Stuart, Charles Whitman
 Suhm, Clarence Falk e
 Sutherland, Thomas George
 Svitavsky, Robert Ingersoll e
 Thompson, Lee
 Thumser, Robert Charles
 Torgeson, Oscar Winfield e
 Townsend, John Banes e
 Trantín, Ernest e
 Tyrrell, Donald William e
 Utegaard, Thomas e
 Van Ermen, Louis e
 Vigneron, Eugene M. e
 Wadsworth, Randolph Lincoln e
 Wahle, Walter Edwin e
 Walden, George Ballard
 Waldron, Russell Eli
 Warren, T. Cary
 Wertheim, Ferd Eliel e
 Whipple, Newton D. e
 White, Robert Bruce e
 Will, Robert James
 Wright, David Samuel
 Yates, De Witt Edward e
 Yoxall, Peter

Austin, Texas
 Forest Jct.
 Milwaukee
 Madison
 Madison
 Oconto
 Milwaukee
 Delafield, N. Dak.
 Racine
 Spring Valley, Minn.
 Madison
 Gwinn, Mich.
 Kirkwood, Mo.
 Edgerton
 Gainesville, Fla.
 Madison
 Milwaukee
 Chicago, Ill.
 Racine
 Madison
 St. Louis, Mo.
 So. Madison
 St. Joseph, Mo.
 Madison
 Lake Geneva
 Madison
 Green Bay
 Chicago, Ill.
 Ft. Thomas, Ky.
 Davenport, Iowa
 Franklin, Ind.
 Madison
 Louisville, Ky.
 Madison
 Madison
 Wilmette, Ill.
 Waukesha
 Spring Green
 Chippewa Falls
 Ansonia, Conn.

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College of Agriculture

Albertz, Hugo William a
 Anderson, Esther Harriet a
 Anderson, Harold
 Anderson, Hilding Edward a
 Anderson, Lela Bateman
 Anderson, Lorena Grace
 Backstrom, Frances Mable
 Bailey, Nellie
 Bailie, Arthur Ray a

Watertown
 Cambridge, Ill.
 Toledo, Ohio
 N. Crandon
 Enterprise, Miss.
 Rock Island, Ill.
 Kansas City, Mo.
 Fennimore
 Lancaster

Banks, David Francis
 Banks, George Heartsill
 Barbour, Ethel Holmes
 Barkow, Clara H.
 Basherov, Samuel
 Belden, John Ellsworth a
 Belden, Stanley Raymond a
 Benecke, Ernst Herman Albert
 Bensend, Louis Adolph
 Beyer, Sylvia I s
 Biery, Edward Andrew
 Blatchford, Percival John a
 Bloecher, Raymond Frances
 Bollenbeck, Ida Kathryn a
 Bolt, Minnie
 Bowstead, John Edelston a
 Bressler, Sadie Lebo (Mrs.)
 Brown, Allan C. I s
 Browne, Katherine Warren a
 Brundage, Dorothy a
 Bull, Leota Irene a
 Burgess, Milo David
 Burwell, Edward Langworthy, Jr. a
 Butcher, Gertrude Marie
 Byrd, Florence Elizabeth
 Byse, Gage Bird
 Cameron, John Edwin
 Cappell, Edmund Peter
 Carlin, Etta Maude
 Carter, Leona Fern
 Christensen, Wiggo Christian
 Clark, William Noble
 Coapman, Verne E.
 Colville, Clarence Leroy a
 Conway, Catherine
 Cooley, Margaret Hamilton a
 Cox, Joseph Frank
 Craig, Beulah
 Cramer, Herbert Lyle a
 Crothers, Donald H. a
 Cummings, John Holbrook a
 Dana, Marie
 Davis, Deane G. a
 Davis, Lynn Alton
 Donlan, Nan
 Dopkins, Clyde De Forrest
 Doran, Myron John
 Dorsey, Louise Lydia a
 Downing, John Fonda, Jr. a
 Drew, Floyd R. a
 Dews, Jacob Guy
 Dyer, Porter Smith a
 Eckert, Helen Elizabeth a

Raines, Tenn.
Villisca, Iowa
East Troy
Embarrass
Madison
Racine
Racine
Milwaukee
Madison
Rutherford, N. J.
Wheeling, W. Va.
Madison
Wittenberg
Madison
Bismarck, N. Dak.
Milwaukee
Austin, Texas
Almond
Waupaca
Grand Rapids, Mich.
Beloit
Maiden Rock
Madison
Greencastle, Ind.
Ladoga, Ind.
Wautoma
Iowa City, Iowa
Cincinnati, Ohio
Pittsburgh, Pa.
Lewistown, Ill.
Hudson
East Lansing, Mich.
Madison
Madison
Eau Claire
Jamaica, N. Y.
East Lansing, Mich.
Maysville, Mo.
Madison
Madison
Antigo
Duluth, Minn.
Spring Valley, Minn.
Madison, Ind.
River Falls
Chicago, Ill.
Anchorage, Ky.
Louisville, Ky.
McAlester, Okla.
Manitowoc
De Soto
Webster Groves, Mo.

Edwards, Dorothy
 Eisenhardt, Carrie
 Engle, Robert Henry
 Englesby, Ebenezer Torrey
 Etheridge, Jesse Irving g
 Fang, Sze Voo
 Fidler, Orville F.
 Field, Albert Martin a
 Field, Clarence Arthur
 Fisher, Carl Victor
 Fisher, Eleanor
 Forslund, Esther Malvina
 Fütterer, Wolfram Alexander a
 Gahagan, John Martin
 Gates, Philip Wilde
 Geimer, Max P.
 Geis, Ruth Ida
 Gibson, Percival De Witt a
 Gift, Lyle Henry
 Godwin, Edith Gertrude
 Greenleaf, Harriet
 Gundersen, Borge Carl a
 Hambleton, James Isaac l s
 Hammer, Lloyd Allen a
 Hanley, Flora (Mrs.)
 Hanson, Julian
 Hay, Ellsworth a
 Helland, Randolph Olaf
 Hembre, Julius Ole
 Hendrickson, Clarence Irving a
 Hesser, Hazel Stuart
 Hill, George O'Neil a
 Hodgson, Alice Elizabeth
 Hopkinson, A. Elizabeth
 Hosford, Robert McGowen
 Humphrey, Martha Estelle a
 Hutchinson, Justina C.
 Huston, Harold Herbert
 Hyland, True
 Jacka, Warren Stanway
 Jackson, Charles Arthur g
 Jobse, Myrtle Elvira a
 Johnson, Albert Randolph a
 Johnson, Oluf Elmer
 Johnson, Violet
 Jones, Edward Cary
 Jones, Margaret Elizabeth
 Jungkunz, William Kunz a
 Kasten, Albert William a
 Keating, Fred E. a
 Kehl, Dora Barbara (Mrs.)
 Kennedy, Marguerite M.
 Kephart, Margaret

Tallula, Ill.
St. Louis, Mo.
Champaign, Ill.
Manhattan, Kans.
Madison
Tali, China
Vincennes, Ind.
Madison
Mt. Horeb
Great Falls, Mont.
Milwaukee
Ironwood, Mich.
Chicago, Ill.
Milton Jct.
Madison
Madison
Massillon, Ohio
Madison
Peoria, Ill.
Grand Rapids, Mich.
Riverside, Ill.
La Crosse
Galloway, Ohio
Madison
Hudson
Sturgeon Bay
Beloit
Madison
Greenwood
Argyle
Pittsburgh, Pa.
Rosendale
Mazomanie
Philadelphia, Pa.
Hudson
Madison
Cambridge, Ill.
Seattle, Wash.
Stoughton
Mineral Point
South Bend, Ind.
Milwaukee
East Orange, N. J.
Westby
Superior
Dyke, Va.
Waupun
Freeport, Ill.
Madison
Ogdensburg
Madison
Sheepshead Bay, N. Y.
Ithaca, N. Y.

Klein, Carrie Angeline
 Kleiner, Ida Louise
 Knipfel, Herbert McKinley
 Kralovec, Arthur James a
 Kuenning, LeRoy George
 Lacy, David Robert a
 Laing, Dorothy
 Landauer, Daisy
 Lau, Zau-ding
 Lauphit, Tse
 LeFeber, Alice Marie
 Leukel, Robert W.
 Lewis, Beulah Hammond (Mrs.)
 Lillie, Myrtle
 Livingston, William Francis
 Lobdell, Harrison
 Lonsdorf, Arthur Joseph
 Lothe, Ada Belinda
 Lottes, Marie Kathryn a
 McAdams, Arthur James a
 MacArthur, Hugh a
 McCullough, Joseph Frank
 McGillivray, Joseph Emmett
 MacGilvra, Ralph Alexander
 McGuinis, James Luther
 McLean, Donald
 McNary, Carrie Murray
 McNulty, Sadie A. a
 Madden, Bernard Eugene
 Manley, Vera Ined
 Marquardt, Julius Charles a
 Marshall, Richard Hughes a
 Maurer, Mae
 Meyer, William Frederic a
 Moore, George William a
 Morris, Lulu
 Morrissey, Nellie Ethel a
 Morse, Marian Sarah
 Moser, Marguerite Helen
 Murphy, Maria Catherine Cecelia
 Naber, Louise
 Neal, Hazel Beatrice
 Nerdrum, Ruth l s
 Noble, Harrison Robert a
 Nott, Edson Lowell
 Nutter, Parks Adair
 Nyhus, Paul Odin
 Oakey, Madeleine Nina
 O'Connell, William Francis
 O'Connor, Vernon William
 Olsen, Helen Carolyn
 Olsen, Sarah Marion
 O'Malley, Frances M. a

Madison
 Eau Claire
 Hammond
 Chicago, Ill.
 Cook, Nebr.
 Madison
 Berlin
 Atlanta, Ga.
 Shanghai, China
 Nanchang, China
 West Allis
 Waunakee
 La Crosse
 Wausau
 Robinson, Ill.
 Chicago, Ill.
 Manitowoc
 Stoughton
 Madison
 Mukwonago
 Madison
 Madison
 Chippewa Falls
 Baraboo
 Corvallis, Ore.
 Meridian, Idaho
 Toledo, Ohio
 Spring Green
 Sawyer
 Ladysmith
 La Crosse
 Madison
 Arcadia
 Milwaukee
 Burke
 Dodgeville
 Bloomington
 Pine River
 Elgin, Ill.
 Staunton, Va.
 Wabash, Ind.
 Terre Haute, Ind.
 Milwaukee
 Manitowoc
 Byron, Ill.
 Martinsville, Ind.
 Chippewa Falls
 Madison
 Roberts
 Renville, Minn.
 Muskegon, Mich.
 Muskegon, Mich.
 Madison

Ormond, Roy Bazanquith 1 s
 Ostrander, Ralph Lester
 Paddock, Claire
 Patton, Stella Trout
 Penniman, Josephine Marea
 Peterson, Christine
 Pettis, Charles Sample a
 Porter, Ella Mae
 Priewe, Elmer Clarence a
 Raymundo, Mariano Bartolome a
 Reich, Benjamin Oscar
 Robbins, Mary Elizabeth
 Roberts, Harlow Pliny a
 Robinson, Carl Louis
 Ross, Gale L.
 Rubert, William Frederick 1 s
 Rude, Dora M.
 Sands, Bessie Marguerite
 Sater, Adella
 Saul, Willis a
 Schafer, Raymond Walter
 Schwartz, Rudolph Alfred
 Scott, J. Cornelius Chapman a
 Seiler, Bonnie
 Sell, Gustav Adolph
 Sell, Mariana Theresa a
 Sergeant, Marshall William a
 Settle, Edward J. a
 Sheffer, Lafayette Milo a
 Sieker, Oscar John
 Sister Mary Evangeline
 Sister Mary Raphael Hildebrandt
 Six, Marjorie
 Smith, Dudley Chase a
 Smith, Muriel Frances
 Speerstra, Ruth a
 Sprecher, Florence Mildred a
 Stehn, Richard John a
 Steele, Lindsay Edward
 Supple, Winifred May
 Swanson, Hildegard Amelia
 Sweet, Joseph Burton
 Tai, Fang-lan
 Tatum, Stephen Burchett
 Taylor, Margaret Lincoln
 Tennis, Gilbert Theodore a
 Thatcher, Mattie Elizabeth
 Thomas, Helen Beck
 Thompson, Faith
 Thompson, John Abbott a
 Thomson, Robert Richard
 Thornby, Mary Youmans
 Tolman, Blanche Stevens a

Brookfield
Madison
Wyoming, Ohio
Madison
Fort Scott, Kans.
Grand Rapids, Mich.
Maaisou
River Forest, Ill.
Orangeville, Ill.
Morong, Rizal, P. I.
Manitowoc
Terre Haute, Ind.
Madison
Tripoli
Schofield
Madison
Edmond
Ladysmith
Helena, Mont.
Depere
Jewell, Kans.
Milwaukee
Darlington, S. C.
Auburn, Ind.
Madison
Madison
Madison
Madison
Madison
Elkhart Lake
Madison
St. Louis, Mo.
Logansport, Ind.
Normal, Ill.
Romeo, Mich.
Whitehall
Madison
Chicago, Ill.
Northfield, Minn.
Deerfield, Ill.
Ironwood, Mich.
Manhattan, Kans.
Shasi, China
Glendale, Ariz.
Lancaster
Stanley
Brookfield
Tekamah, Nebr.
Huntington, Ind.
Madison
Jefferson, Ky.
Madison
Chicago, Ill.

Towler, James A.
 Trestrail, Marjorie Elizabeth
 Trickey, Dorothy May a
 Trojahn, Albert August
 Tyler, Marion Esther
 Utman, Mary Isabelle
 Vennus, Elizabeth Mary a
 Walsh, Helen a
 Walters, Eugene Cantell
 Walton, Charles William a
 Wanzer, Howard Stanley a
 Wason, Faith Louise
 Wengel, Edith Magdalene a
 Wenner, Dorothy
 Wertz, Virgil Roe a
 White, Morris Densmore a
 Williams, Guy P. a
 Woelfel, George Henry
 Wood, Kate
 Woodcock, Adelaide Tracy
 Works, Mildred Emma
 Young, Annie Little
 Young, Mary McMahon
 Zuehlke, Ulrich a

Madison
 Eau Claire
 Berlin
 Laona
 Glidden
 Hudson
 Menasha
 Beloit
 Albany, Ga.
 Scales Mound, Ill.
 Chicago, Ill.
 Lowell, Ind.
 Madison
 Indianapolis, Ind.
 Madison
 Superior
 Madison
 Chilton
 Auxvasse, Mo.
 Spencer, Iowa
 Madison
 Kansas City, Mo.
 Pittsburgh, Pa.
 Milwaukee

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Law School

Allman, Major Fisher l
 Anderson, Morgan McDonald, B. A. l
 Ary, Lester Clyde, B. A.
 Bernstein, Charles R.
 Bouchard, Adelbert George, B. A.
 Briggs, Henry Russell l s
 Brunner, Marie Angelina (Mrs.) l
 Brunner, Stephen Walter l
 Caradine, Mahlon Humphrey l s, f
 Clemens, Albert Harrison, B. A.
 Cohn, Samuel Cecil
 Conant, Rellis Gilbert
 Cunningham, Sterling R.
 Curtis, Joseph C., B. S.
 Eberlein, Arthur Herman
 Featherstone, John Douglas, LL. B.
 Fischer, Robert Harrison
 Flanagan, Arthur Eugene l
 Frawley, James Robert, B. A. l
 Glassner, William, B. A. g l
 Godfrey, Alfred Lawrence, B. A. l
 Gullickson, Gerhardt Oscar, B. A. l
 Haberla, Howard Paul
 Harrington, Richard
 Hoffman, Ernest Louis l

Crown Point, Ind.
 Milwaukee
 Sioux City, Iowa
 Cleveland, Ohio
 Munising, Mich.
 Madison
 Madison
 Madison
 Rochester, Minn.
 Milwaukee
 Hancock
 Bismarck, Ill.
 New Lisbon
 Wausau
 Greenwood, S. C.
 Two Rivers
 Lannon
 Eau Claire
 Milwaukee
 Whitewater
 Madison
 Milwaukee
 Oshkosh
 Thiensville

Hydle, Lars Larson, B. A.	<i>Bowbells, N. Dak.</i>
Jolley, Albert Rembrandt I	<i>Whitewater</i>
Kennedy, Delbert James	<i>West Bend</i>
Kloeb, Frank Le Blond	<i>Celina, Ohio</i>
Kumm, Davis Wallace, Ph. B.	<i>Madison</i>
Lanham, Morton Ward, B. S.	<i>Grafton, W. Va.</i>
Lee, Francis Knute, B. A.	<i>Elroy</i>
Lee, John Samuel, M. A.	<i>Forest City, Pa.</i>
Liebel, Russell Brooks	<i>Milwaukee</i>
Loftsgordon, Henry I	<i>Madison</i>
Love, James Lyle, LL. B.	<i>York, S. C.</i>
McGaughey, Guy E., B. A. I	<i>Lawrenceville, Ill.</i>
Mahuran, Stuart	<i>Hazelton, Iowa</i>
Marriott, Francis Marion, B. S.	<i>Delaware, Ohio</i>
Monk, Robert William I	<i>Neillsville</i>
Morris, Stanley Clarence, B. A.	<i>Wallace, W. Va.</i>
Murphy, John William I	<i>Platteville</i>
Napiecinski, Peter Anthony I	<i>Two Rivers</i>
Nau, John Harold, B. A.	<i>Columbus, Ohio</i>
Nelson, Carroll F. E.	<i>Minneapolis, Minn.</i>
North, Reynolds Bacon I	<i>Madison</i>
Oksanen, Otto William, B. A.	<i>Brule</i>
Park, Lyman Barnes I	<i>Stevens Point</i>
Poirot, Severine Andrew	<i>Belleville, Ill.</i>
Pomeroy, Herbert Stuart, B. A. I	<i>Madison</i>
Pors, Charles Miller, B. A. I	<i>Marshfield</i>
Potter, Louis Richard I	<i>Madison</i>
Pottinger, Earl Henry I	<i>Madison</i>
Raeder, Lester William I	<i>Cedarburg</i>
Rafter, Joseph Leo, B. A.	<i>Scranton, Pa.</i>
Ramsdell, Bailey Edwin, B. A. I	<i>Madison</i>
Reddy, Walter Francis	<i>Madison</i>
Refsell, Oscar Norton, M. A.	<i>Wallingford, Iowa</i>
Roberts, Royal Arlington, B. A.	<i>Madison</i>
Schlueter, Walter Henry, Pd. B.	<i>Jackson, Mo.</i>
Smith, Emmett Patrick	<i>Madison</i>
Smith, Leon Logan, B. A.	<i>Sheboygan</i>
Stolts, Victor Merlin	<i>Madison</i>
Strehlow, Robert Reinholdt, LL. B.	<i>Madison</i>
Swancutt, Ivan Leroy	<i>Viola</i>
Thiele, Arthur Albert, B. A.	<i>Green Bay</i>
Torphy, Thomas Emmet	<i>Milwaukee</i>
Werba, Marcus Arthur I	<i>Milwaukee</i>
White, Irvin Arnold, B. a. I	<i>Antigo</i>
Whyte, Malcolm K., B. A. I	<i>Madison</i>
Wickhem, John Dunne, B. A.	<i>Beloit</i>
Wileberscheid, Jacob Charles I	<i>Valders</i>
Woods, Harlie Dalton, M. A.	<i>Abilene, Texas</i>
Young, Carl Fred, B. A. I	<i>Madison</i>

STATISTICAL SUMMARIES

GRADUATES

		1916
Number of first degrees granted, 1854-1916.....	12,172	711
Present Courses:		
Courses leading to the degree of Bachelor of Arts, 1904-1916.....	3,671	359
(Included in the above is the Course in Commerce, 1904-1916, 427; 1916, 48; and the Course in Journalism, 1914-1916, 34; 1916, 15.)		
Course for Normal School Graduates, Ph. B., 1898-1916.....	488	25
Chemistry Course, B. S., 1909-1916.....	80	18
Medical Science Course, B. S., 1909-1916.....	125	25
Pharmacy Course, B. S., 1895-1916.....	55	2
Pharmacy Course, Ph. G., 1884-1916.....	330	8
School of Music, M. G., 1898-1916.....	134	2
Course for Supervisors of Music, 1910-1916.....	57*	18*
Course in Agriculture, B. S., 1878-1916.....	623	100
Home Economics Course, B. S., 1909-1916.....	155	42
Course in Agriculture (Middle Course,) Ag. G., 1910-1916.....	114*	20*
Law Course, LL. B., 1869-1916.....	2,030	31
Civil Engineering Course, B. S., 1873-1916.....	637	32
Mechanical Engineering Course, B. S., 1876-1916.....	435	19
Electrical Engineering Course, B. S., 1892-1916.....	559	29
Chemical Engineering Course, B. S., 1903-1916.....	94	15
Mining Engineering Course, B. S., 1910-1916	30	2
Courses discontinued:		
Ancient Classical Course, B. A., 1854-1903.....	470	
Modern Classical Course, B. L., 1876-1903.....	548	
English Course, B. L., 1887-1903.....	459	1
Civic Historical Course, B. L., 1893-1903.....	383	
General Science Course, B. S., 1886-1903.....	722	
Geology, B. S., 1914.....	1	

* Not included in totals.

		1916
School of Commerce (B. L., 8; B. S., 1.) 1902-1903.....	9	
Normal Course, 1865-1868.....	25	
Metallurgical Engineering Course, B. M. E., 1876-1896.....	16	
General Engineering Course, B. S., 1901-1910	93	1
Higher degrees on examination, 1875-1916.....	1,994	226
Master, 1879-1916.....	1,354	167
Engineer, 1879-1916.....	319	25
(Included in the above is the Advanced Course in Engineering, 1910-1916, 78; 1916, 11.)		
Doctor of Public Health, 1912-1915.....	2	
Doctor of Philosophy, 1892-1916.....	319	34

DEGREES

Number of first degrees granted, 1854-1916.....		12,172
Bachelor of Arts, 1854-1916.....	4,141	
Bachelor of Philosophy, 1898-1916.....	488	
Bachelor of Letters, 1876-1903.....	1,398	
Bachelor of Science, 1873-1916.....	3,610	
Bachelor of Metallurgical Engineering, 1876-1896.....	16	
Bachelor of Laws, 1869-1916.....	2,030*	
Graduate in Music, 1896-1916.....	134	
Graduate in Pharmacy, 1884-1916.....	330	
Graduate in Agriculture (Middle Course,) 1910-1916.....	114*	
Normal Course, 1865-1868.....	25	
Course for Supervisors of Music, 1910-1916....	57*	
Higher degrees on examination, 1875-1916.....		1,994
Master, 1879-1916.....	1,354	
Engineer, 1879-1916.....	319	
Doctor of Public Health, 1912-1915.....	2	
Doctor of Philosophy, 1892-1916.....	319	
Grand Total of first and higher degrees granted, 1854-1916.....		14,166

* Not included in totals.

FACULTY

President and Deans.....	10
Professors.....	93
Associate Professors.....	56
Assistant Professors.....	147
Lecturers (giving part time).....	25
Instructors.....	226
Assistants (mainly half time, but a few more than half time, and a considerable number less than half time).....	169
Student Assistants (small part of time).....	25
Total.....	751

The above summary includes:

a. Members of the instructional staff at Madison, both for resident instruction and for extension.

b. Extension workers throughout the state.

c. Administrative officers and librarians having the rank of any member of the instructional staff.

Included in the above summary are the following who are on leave of absence for the academic year, 1916-17: Professors, 2; Associate Professors, 2; Assistant Professors, 4.

There are seven emeritus professors not included in the above summary.

STUDENTS

	Men	Women	Total
GRADUATE SCHOOL—			
Fellows.....	31	8	39
Scholars.....	19	7	26
Other Graduate Students.....	291	94	385
	341	109	450

(Not carried to totals because included in lists below.)

COLLEGE OF LETTERS AND SCIENCE—

Graduate Students.....	224	89	313
Seniors.....	357	263	620
Juniors.....	423	328	751
Sophomores.....	414	282	696
Freshmen.....	576	357	933
Adult Specials, Fourth Year....	3	2	5
Adult Specials, Third Year.....	8	3	11
Adult Specials, Second Year....	15	11	26
Adult Specials, First Year.....	36	26	62

2,056 1,361 3,417

	Men	Women	Total
Enrollment by Courses:			
Course in Commerce:			
Seniors.....	101	4	105
Juniors.....	135	2	137
Sophomores.....	152	0	152
Freshmen.....	235	14	249
Adult Specials.....	14	0	14
	<hr/> 637	<hr/> 20	<hr/> 657
Course for Normal School			
Graduates:			
Seniors.....	14	13	27
Juniors.....	17	23	40
	<hr/> 31	<hr/> 36	<hr/> 67
Course in Journalism:			
Seniors.....	7	3	10
Juniors.....	11	6	17
Sophomores.....	18	11	29
Freshmen.....	25	21	46
Adult Specials.....	5	1	6
	<hr/> 66	<hr/> 42	<hr/> 108
Course in Pharmacy:			
Four Year Course:			
Seniors.....	1	0	1
Juniors.....	0	0	0
Sophomores.....	3	1	4
Freshmen.....	1	1	2
Adult Specials.....	1	0	1
Two Year Course:			
Second Year.....	9	3	12
First Year.....	25	4	29
	<hr/> 40	<hr/> 9	<hr/> 49
Course in Chemistry:			
Seniors.....	22	2	24
Juniors.....	30	2	32
Sophomores.....	27	5	32
Freshmen.....	21	1	22
Adult Specials.....	2	0	2
	<hr/> 102	<hr/> 10	<hr/> 112
Course without Foreign Language Requirement:			
Seniors.....	2	0	2
Juniors.....	6	0	6
Sophomores.....	7	4	11
Freshmen.....	15	11	26
Adult Specials.....	1	0	1
	<hr/> 31	<hr/> 15	<hr/> 46

	Men	Women	Total
Course for Training of Teachers:			
Graduate Students.....	3	7	10
Seniors.....	42	129	171
Juniors.....	20	101	121
	<hr/> 65	<hr/> 237	<hr/> 302

(Two senior men are in both the Teachers Training Course and the Course in Commerce; six senior men, five senior women and four junior women are in both the Teachers Training Course and the Course for Normal School Graduates; three junior men are in both the Teachers Training Course and the Course without Foreign Language Requirement.)

Letters and Science Students
not in special courses:

Graduate Students.....	221	82	303
Seniors.....	176	117	293
Juniors.....	207	198	405
Sophomores.....	198	258	456
Freshmen.....	254	305	559
Adult Specials.....	39	41	80
	<hr/> 1,095	<hr/> 1,001	<hr/> 2,096

COLLEGE OF ENGINEERING—

Graduate Students.....	16	0	16
Seniors.....	135	0	135
Juniors.....	118	0	118
Sophomores.....	139	0	139
Freshmen.....	238	0	238
Adult Specials, Fourth Year....	2	0	2
Adult Specials, Third Year.....	3	0	3
Adult Specials, Second Year....	2	0	2
Adult Specials, First Year.....	4	0	4
	<hr/>	<hr/>	<hr/>

657 0 657

Enrollment by Courses:

Civil Engineering Course:

Seniors.....	28	0	28
Juniors.....	23	0	23
Sophomores.....	26	0	26
	<hr/> 77	<hr/> 0	<hr/> 77

Mechanical Engineering Course:

Seniors.....	34	0	34
Juniors.....	30	0	30
Sophomores.....	41	0	41
Adult Specials.....	2	0	2
	<hr/> 107	<hr/> 0	<hr/> 107

	Men	Women	Total
Electrical Engineering Course:			
Seniors.....	45	0	45
Juniors.....	40	0	40
Sophomores.....	51	0	51
Adult Specials.....	3	0	3
	<hr/> 139	<hr/> 0	<hr/> 139
Chemical Engineering Course:			
Seniors.....	24	0	24
Juniors.....	22	0	22
Sophomores.....	16	0	16
Adult Specials.....	1	0	1
	<hr/> 63	<hr/> 0	<hr/> 63
Mining Engineering Course:			
Seniors.....	4	0	4
Juniors.....	3	0	3
Sophomores.....	5	0	5
Adult Specials.....	1	0	1
	<hr/> 13	<hr/> 0	<hr/> 13
COLLEGE OF AGRICULTURE—			
Graduate Students.....	101	20	121
Seniors.....	109	44	153
Juniors.....	122	86	208
Sophomores.....	148	73	221
Freshmen.....	124	74	198
Adult Specials, Fourth Year...	4	0	4
Adult Specials, Third Year.....	5	2	7
Adult Specials, Second Year...	2	1	3
Adult Specials, First Year.....	10	4	14
	<hr/> 625	<hr/> 304	<hr/> 929
Enrollment by Courses:			
Long Course:			
Seniors.....	109	1	110
Juniors.....	122	1	123
Sophomores.....	99	1	100
Freshmen.....	76	2	78
Adult Specials.....	16	1	17
	<hr/> 422	<hr/> 6	<hr/> 428
Middle Course:			
Second Year.....	49	1	50
First Year.....	48	1	49
Adult Specials.....	5	0	5
	<hr/> 102	<hr/> 2	<hr/> 104

	Men	Women	Total
Course in Home Economics:			
Seniors.....	0	43	43
Juniors.....	0	85	85
Sophomores.....	0	71	71
Freshmen.....	0	71	71
Adult Specials.....	0	6	6
	<hr/>	<hr/>	<hr/>
Course for Training of Teachers (included above):	0	276	276
Seniors.....	33	33	66
Juniors.....	26	62	88
Second Year, Middle Course	5	0	5
Adult Specials.....	1	0	1
	<hr/>	<hr/>	<hr/>
LAW SCHOOL—	65	95	160
Third Year.....	45	0	45
Second Year.....	46	0	46
First Year.....	46	0	46
Students in Letters and Science electing law studies..	21	0	21
Unclassified Students.....	31	1	32
	<hr/>	<hr/>	<hr/>
MEDICAL SCHOOL—	189	1	190
Second Year.....	52	1	53
First Year.....	71	8	79
Course in Public Health.....	1	0	1
	<hr/>	<hr/>	<hr/>
	124	9	133
SCHOOL OF MUSIC—			
Four Year Course:			
Seniors.....	0	2	2
Juniors.....	0	7	7
Sophomores.....	3	9	12
Freshmen.....	0	18	18
Adult Specials.....	0	2	2
Supervisors' Course:			
Second Year.....	0	21	21
First Year.....	1	25	26
Adult Specials.....	1	5	6
Unclassified Students.....	2	12	14
	<hr/>	<hr/>	<hr/>
Course for Training of Teachers (included above):	7	101	108
Juniors.....	0	3	3
Sophomores.....	0	2	2
Freshmen.....	0	1	1
Second Year, Supervisors' Course.....	0	17	17
First Year, Supervisors' Course.....	0	18	18

	Men	Women	Total
Adult Specials, Supervisors' Course.....	0	3	3
	0	44	44
Students in other colleges electing music—159.			
WISCONSIN LIBRARY SCHOOL—			
Library Course.....	0	31	31
Joint Course.....	0	6	6
	0	37	37
TOTAL.....	3,658	1,813	5,471
Deducting twice enumerated.....	141	12	153
NET TOTAL, REGULAR YEAR.....	3,517	1,801	5,318

The item of 153 students twice enumerated occurs because of double classification in two colleges as follows:

Letters and Science and Medicine.....	117	6	123
Letters and Science and Law....	24	0	24
Letters and Science and Wisconsin Library School.....	0	6	6
	141	12	153

SUMMER SESSION OF 1916—

College of Letters and Science:			
Graduate Students.....	399	459	858
Undergraduates and Teachers.	680	901	1,581
College of Engineering:			
Graduate Students.....	19	0	19
Undergraduates.....	170	0	170
College of Agriculture:			
Graduate Students.....	76	31	107
Undergraduates.....	137	108	245
Law School.....	73	1	74
School of Music.....	4	70	74
(Students in other colleges electing music—70.)			
	1,558	1,570	3,128
Deducting students in attendance during the regular year	547	254	801

1,011 1,316 2,327

ADDITIONAL ENROLLMENT, COLLEGE OF AGRICULTURE—

Short Course in Agriculture:			
Second Year.....	120	2	122
First Year.....	195	1	196
	315	3	318

	Men	Women	Total
Dairy Course.....	158	0	158
	473	3	476
GRAND TOTAL, EXCLUDING EXTENSION STUDENTS.....	5,001	3,120	8,121

EXTENSION DIVISION (EXTRA-MURAL COLLEGE)—

Correspondence-Study Department..... 9,537

This total enrollment comprises all those who have enrolled for correspondence instruction within the current year, and also those carried over who had enrolled prior to July 1, 1916, but whose registration was then in force and whose time limit for completion of work had not terminated. Correspondence-Study enrollments are made at any time throughout the entire year.

SUMMARY BY STATES, FOREIGN COUNTRIES AND SEX

	Men	Women	Total
Wisconsin.....	3,445	1,661	5,106
Illinois.....	372	375	747
Indiana.....	138	153	291
Ohio.....	107	127	234
Iowa.....	105	115	220
Missouri.....	67	146	213
Michigan.....	96	78	174
Minnesota.....	71	53	124
Pennsylvania.....	35	55	90
New York.....	46	37	83
South Dakota.....	49	28	77
Kansas.....	33	43	76
Montana.....	28	23	51
Kentucky.....	27	21	48
Nebraska.....	23	25	48
Texas.....	34	11	45
North Dakota.....	30	12	42
New Jersey.....	19	11	30
District of Columbia.....	12	16	28
Massachusetts.....	13	12	25
Colorado.....	7	16	23
Mississippi.....	10	11	21
Washington.....	15	6	21
Tennessee.....	13	6	19
Oklahoma.....	12	6	18
West Virginia.....	14	4	18
Idaho.....	12	5	17
Maryland.....	10	7	17
California.....	8	5	13
Oregon.....	7	6	13
South Carolina.....	13	0	13
Georgia.....	3	9	12
Virginia.....	11	1	12
Arkansas.....	5	5	10

	Men	Women	Total
Alabama.....	6	3	9
Louisiana.....	6	3	8
Connecticut.....	7	1	9
Florida.....	6	2	8
New Mexico.....	4	3	7
North Carolina.....	6	0	6
Maine.....	3	2	5
New Hampshire.....	3	1	4
Vermont.....	3	1	4
Wyoming.....	2	2	4
Rhode Island.....	2	1	3
Utah.....	1	2	3
Arizona.....	2	0	2
Nevada.....	0	1	1
China.....	36	0	36
Canada.....	5	4	9
Philippine Islands.....	3	0	3
Australia.....	1	1	2
Chile.....	2	0	2
Hawaiian Islands.....	2	0	2
Japan.....	2	0	2
Norway.....	0	2	2
Alaska.....	0	1	1
Argentina.....	1	0	1
Austria.....	1	0	1
Belgium.....	0	1	1
England.....	1	0	1
India.....	1	0	1
Java.....	1	0	1
Peru.....	1	0	1
Porto Rico.....	1	0	1
Spain.....	1	0	1
Uruguay.....	1	0	1
Total for entire year.....	5,001	3,120	8,121
Students registered for regular year, 1916-17:			
Resident.....	2,580	1,229	3,809
Nonresident.....	937	572	1,509
Total.....	3,517	1,801	5,318
Students registered in Summer Session of 1916 and not during the regular year:			
Resident.....	459	432	891
Nonresident.....	552	884	1,436
Total.....	1,011	1,316	2,327
Additional Enrollment, College of Agriculture:			
Resident.....	406	0	406
Nonresident.....	67	3	70
Total.....	473	3	476

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